GRACE ME GUIDE

James Forbes Esq.r

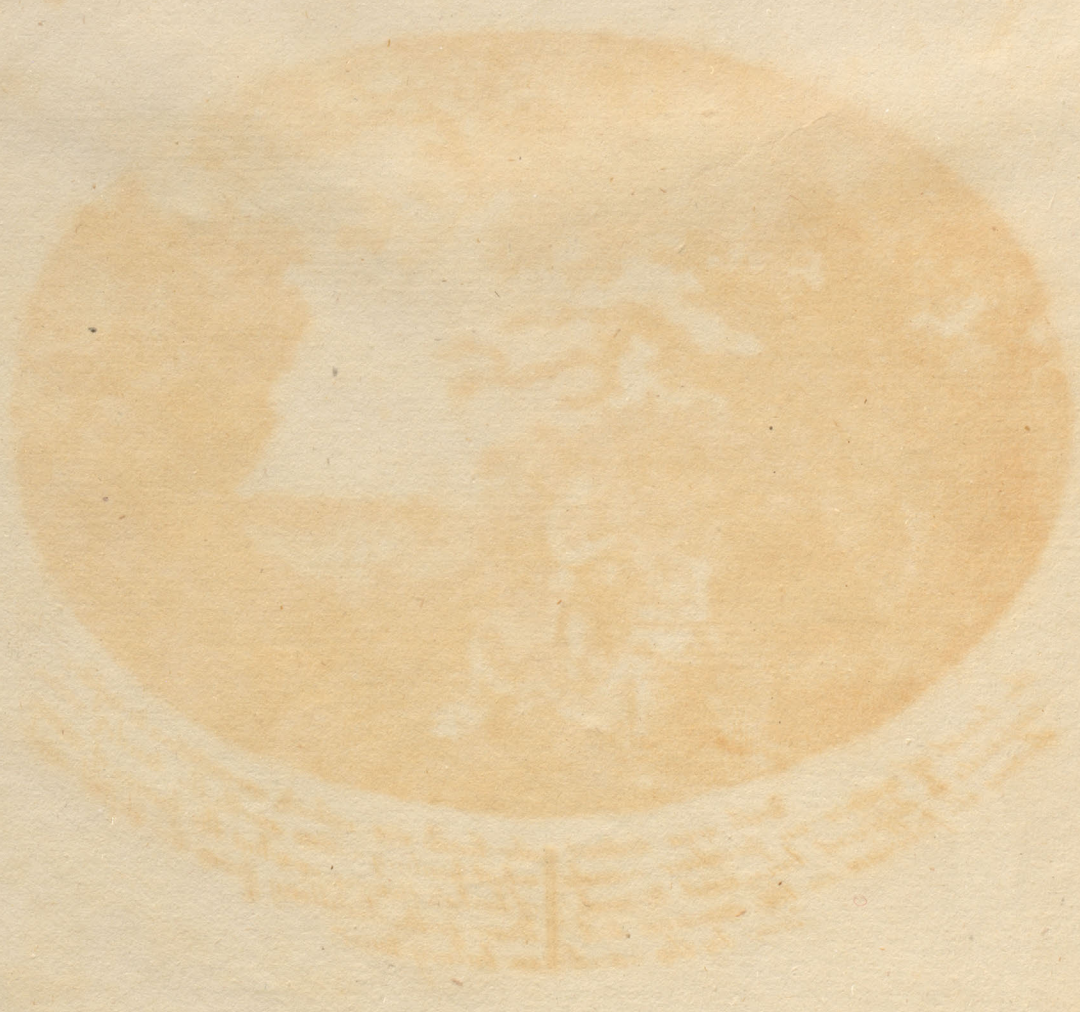
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FLORA LONDINENSIS;

OR,

PLATES AND DESCRIPTIONS

OF SUCH

P L A N T S

AS GROW WILD IN THE

ENVIRONS OF LONDON;

WITH THEIR

Places of *Growth* and Times of *Flowering*; their ſeveral *Names* according to LINNÆUS and other Authors:

WITH

A particular DESCRIPTION of each PLANT in LATIN and ENGLISH.

TO WHICH ARE ADDED,

Their ſeveral Uſes in *Medicine*, *Agriculture*, *Rural Oeconomy*, and other *Arts*.

By WILLIAM CURTIS.

VOL. I.



"with wise intent the hand of nature on peculiar minds imprints a different bias, and to each decrees its province in the common toil" some by the hand

she leads o'er vales & mountains to explore what healing virtue ſwells the tender veins of herbs & flowers; or what the beams of morn draw forth, diſtilling from the cliſted rind in balmy tears".

LONDON:

Printed for and Sold by the AUTHOR, at his BOTANIC-GARDEN, *Lambeth-Marſh*; and B. WHITE and SON, Bookſellers, in *Fleet-Street*.



THE

PREFACE.

ALTHOUGH the Author does not here mean to give a Preface at large, reſerving that until the firſt volume, containing thirty-ſix numbers or two hundred and ſixteen plants, ſhall be completed; yet he preſumes it will be ſatisfactory to his ſubſcribers and the public, to be informed a little more fully of the nature and deſign of the work; as it will alſo give him an opportunity of anſwering ſome few objections that have been made to the plan of it.

The primary deſign of it, then, is to facilitate a knowledge of the plants of our own country, and eſtabliſh each ſpecies and variety on a firm baſis: this the Author conſiders as the grand deſideratum at preſent; this arduous taſk once accompliſhed, a way will be opened, and a foundation laid, for numberleſs improvements in Medicine, Agriculture, &c.

To be enabled to do this, he means to take the greateſt pains in the examination of thoſe plants which he figures; to have them drawn from living ſpecimens moſt expreſſive of the general habit or appearance of the plant as it grows wild; to place each plant, as much as is conſiſtent, in the moſt pleaſing point of view; and to be very particular in the delineation and deſcription of the ſeveral parts of the flower and fruit, more eſpecially where they characterize the plant.

And in order that he may obtain a more perfect knowledge of each plant; that he may ſee it in every ſtage of its growth, from the germination to the maturity of its ſeed; that he may compare and contraſt the ſeveral ſpecies together; that he may make experiments to elucidate the nature of ſuch as are obſcure, or bring into more general uſe thoſe which bid fair to be of advantage to the public; he is now cultivating each of them in a garden near the city, into which, by the kind aſſiſtance of his friends, he has already introduced, in the courſe of one year, about five hundred different ſpecies, including ſixty of that moſt valuable tribe of plants the graſſes.

Although the aſcertaining and fixing of the plants will be his principal object, yet to make the work more uſeful to the public, as well as inſtructive and entertaining to the young botaniſt, his utmoſt endeavours will be uſed to lay before them whatever may be found *uſeful* in old botanic writers; and here they muſt not be ſurpriſed to find many of the numerous and imaginary virtues, which they attributed to almoſt every plant, purpoſely omitted: the diſcoveries made by modern authors, particularly relative to *Agriculture* and *Rural Oeconomy*, will be carefully attended to; as here ſeems to be a field juſt opening to view, from whence the public is likely to draw great and laſting advantages: and as the knowledge of the plants themſelves is firſt neceſſary, and for want of which, indeed, the experimental farmer cannot effectually communicate his improvements, he finds himſelf peculiarly happy in contributing his ſhare to the public good.

He is nevertheleſs ſenſible how inadequate his abilities, or indeed the abilities of any *one* perſon are, to render a work of this kind any ways complete; he therefore reſpectfully ſolicits the aſſiſtance of thoſe who wiſh well to the improvement of *Engliſh Botany* and *Engliſh Agriculture:* any information they ſhall be pleaſed to communicate, ſhall with thoſe favours he has already received from divers of his friends, be gratefully acknowledged; and to induce them the more readily to communicate, he has ſubjoined a catalogue of thoſe plants which (with many others) are already drawn, and which he intends ſhall form the next Faſciculus.

He is ſorry it has not been in his power to publiſh his numbers ſo faſt as was originally propoſed: the delay has chiefly been occaſioned by the loſs of one of his principal artiſts, whoſe place is now ſupplied by two others equally eminent; ſo that the drawing and engraving, which before fell to the ſhare of one perſon, being now divided betwixt two, he flatters himſelf he ſhall be able to publiſh a number once a month, or ſix weeks at furtheſt—he is however determined never to ſacrifice the accuracy or utility of the work to hurry—on this principle he has been at the expence of having ſome of his plates engraven twice, and even three times over, before he could venture to publiſh them. As the delay has originated from this ſource, he hopes none of his ſubſcribers that have hitherto ſo generouſly contributed to the carrying on of the work, will withdraw that aſſiſtance, which alone can enable him to proſecute it with advantage to the public, credit to himſelf, and ſatisfaction to them.

It now remains to obviate ſome few objections which have been made to the plan of this work; and firſt, it has been ſuggeſted to the Author, that it would have been better received, if, inſtead of purſuing the preſent plan, he had publiſhed thoſe plants only which were not figured in the *Flora Danica*, a work now carrying on in *Denmark* under the auſpices of the *King:* but a few moments reflection, muſt, he preſumes, be ſufficient, to convince every unprejudiced perſon how inadequate ſuch a partial publication would have been to the making a knowledge of the plants of our country more general among ourſelves—at beſt ſuch a work could only anſwer the purpoſe of thoſe few individuals who are in poſſeſſion of that part of the *Flora Danica* already publiſhed; and as that is ſtill going on, there is no doubt but the ſame plants would be publiſhed by both Authors; thus, the *Butomus umbellatus*, *Solanum Dulcamara*, and *Ervum hirſutum*, have been publiſhed in the *Flora Danica* ſince they were publiſhed in the *Flora Londinenſis*, ſo that in the end even thoſe perſons would be obliged to purchaſe duplicates of the ſame plant.

Another reaſon why the Author could not adopt the plan propoſed to him, was the limited ſcale of the *Flora Danica*, which contains the figures and names of the plants only, but gives us no account of their properties, nor teaches us how to diſtinguiſh the difficult plants from one another; the plates likewiſe being *ſmall folio*, cannot admit many of the plants of their natural ſize, ſeveral of the graſſes for inſtance, as the *Feſtuca fluitans* and *Aira aquatica* are obliged to be ſo cut and diminiſhed as ſcarcely to be known. Many other objections might be urged without any view to depreciate a work which, though not ſo complete in ſome reſpects as could be wiſhed, has exceeding great merit:—but theſe will probably be deemed ſufficient.

The

The engraving of one plant only on each plate has been another objection which ſome have ſtrongly urged, while others have in as warm terms teſtified their approbation of it. It may be proper to mention, that whether one or more had been engraven on a plate, the difference in the expence would have been trifling, and chiefly in the paper; as they now are, each is diſtinct, and every one is at liberty to place them according to that ſyſtem which he moſt approves of.

The want of figures of reference to the plates, or letter-preſs, has been perhaps a more ſolid objection; but the Author hopes, that by the uſe of the indexes deſcribed below, this alſo will be obviated.

Having now, ſo far as he can recollect, anſwered every thing deſerving the name of an objection, he willingly ſubmits his performance to the judgment of a candid and impartial public; conſcious of having uſed his beſt endeavours to be ſerviceable in his department.

Uſes of the INDEXES, with *Directions* for *Binding*.

IN the firſt Index the plants are placed according to the Syſtem of LINNÆUS, with which it is preſumed, the greateſt part of his ſubſcribers are beſt acquainted. To find out any plant, even though the perſon be not acquainted with this mode of arrangement, look in the alphabetical Engliſh or Latin Index, and you will find the figures correſponding with them as placed in the book: if, for example, I want to find Ivy, I look for it in Index, No. 3, where the Engliſh names are alphabetically arranged, and find it to be the ſixteenth plate; as there are ſeventy-two plates in each Faſciculus, I can readily gueſs within a few plates where it is placed: to thoſe who have been accuſtomed to look out plants in LINNÆUS's works it will come eaſier; but if each ſubſcriber will take the ſmall pains of figuring the plates with a black lead pencil, any plant may then be immediately referred to. The Author could not hit on any mode more eligible, conſiſtent with the irregular order in which he has been obliged to publiſh his plants.

With every third Faſciculus will be given a general and more copious Index, with a Gloſſary of the technical terms uſed in the work.

He would recommend to his ſubſcribers, that each Faſciculus containing twelve numbers, be *bound in boards, and not cut at the edges; the plates to be placed in the ſame order in which they occur in the firſt Index;* taking care that each plate be put oppoſite to the letter-preſs belonging to it, with a leaf of thin paper betwixt them. If any ſhould be at a loſs to have them properly done, they will be pleaſed to ſend them to RAHAM REEPE's, Bookbinder, in *Crooked-Lane*, near the *Monument*, who binds the Author's.

N. B. It may be neceſſary to caution the Bookbinder againſt beating the Numbers, as that operation would probably deſtroy the beauty of the plates.

A

CATALOGUE

Of thoſe Plants which are *intended* to be Publiſhed in the next *Faſciculus*.

Anemone nemoroſa
Adoxa moſchatellina
Ajuga reptans
Aira præcox
Arabis thaliana
Arenaria tenuifolia
Achillæa Ptarmica
Briza media
Corylus avellana
Chærophyllum ſylveſtre
Convolvulus arvenſis
Circæa lutetiana
Chenopodium Vulvaria
Dipſacus ſylveſtris
Epilobium anguſtifolium
Epilobium ramoſum
Erica cinerea
Fumaria officinalis
Feſtuca duriuſcula
Feſtuca myuros
Glechoma hederacea
Geranium molle
Geranium rotundifolium
Geranium perenne
Geranium Columbinum
Hyacinthus non ſcriptus
Hyoſycamus niger
Hypericum montanum
Hypericum quadrangulum
Hypericum hirſutum
Ilex Aquifolium
Iris Pſeudacorus
Lamium amplexicaule
Lyſimachia nemorum
Lyſimachia nummularia
Lyſimachia tenella
Lyſimachia vulgaris
Liguſtrum vulgare
Lotus corniculata
Myoſurus minimus
Malva officinalis
Malva minor
Medicago lupulina
Oſmunda ſpicant
Oxalis Acetoſella
Orchis Morio
Ornithopus perpuſillus
Plantago lanceolata
Plantago major
Plantago Coronopus
Plantago media
Poa rigida
Poa compreſſa
Polygonum amphibium
Polytrichum commune
Ranunculus hirſutus
Ranunculus Ficaria
Sagina erecta
Saxifraga tridactylites
Spergula nodoſa
Sedum daſyphyllum
Sedum reflexum
Symphytum officinale
Sparganium erectum
Tuſſilago farfara
Tormentilla erecta
Thymus ſerpyllum
Trifolium fragiferum
Valeriana dioica
Veronica officinalis
Veronica hederifolia
Veronica arvenſis

INDEX I.

In which the Plants contained in the firſt Faſciculus are arranged according to the Syſtem of LINNÆUS.

	Latin Name.	*Claſs and Order.*
1	Veronica agreſtis	DIANDRIA *Monogynia.*
2	Veronica Chamædrys	
3	Veronica ſerpyllifolia	
4	Anthoxanthum odoratum	DIANDRIA *Digynia.*
5	Aira aquatica	TRIANDRIA *Digynia.*
6	Poa annua	
7	Feſtuca fluitans	
8	Bromus mollis	
9	Bromus ſterilis	
10	Dipſacus piloſus	TETRANDRIA *Monogynia.*
11	Hottonia paluſtris	PENTANDRIA *Monogynia.*
12	Anagallis arvenſis	
13	Convolvulus ſepium	
14	Solanum Dulcamara	
15	Lonicera Periclymenum	
16	Hedera Helix	
17	Conium maculatum	PENTANDRIA *Digynia.*
18	Æthuſa Cynapium	
19	Scandix Anthriſcus	
20	Alſine media	PENTANDRIA *Trigynia.*
21	Erica tetralix	OCTANDRIA *Monogynia.*
22	Polygonum Biſtorta	OCTANDRIA *Digynia aut Trigynia.*
23	Polygonum Perſicaria	
24	Polygonum Penſylvanicum	
25	Polygonum var. caule maculato	
26	Polygonum Hydropiper	
27	Polygonum aviculare	
28	Polygonum minus	
29	Butomus umbellatus	ENNEANDRIA *Hexagynia.*
30	Saxifraga granulata	DECANDRIA *Digynia.*
31	Sedum album	DECANDRIA *Pentagynia.*
32	Sedum acre	
33	Lychnis Flos Cuculi	DECANDRIA *Pentagynia.*
34	Ceraſtium aquaticum	
35	Euphorbia peplus	DODECANDRIA *Trigynia.*
36	Euphorbia Helioſcopia	
37	Potentilla reptans	ICOSANDRIA *Polygynia.*
38	Ranunculus bulboſus	POLYANDRIA *Polygynia.*
39	Ranunculus acris	
40	Caltha paluſtris	
41	Verbena officinalis	DIDYNAMIA *Gymnoſpermia.*
42	Lamium rubrum	
43	Thymus Acinos	
44	Euphraſia Odontites	DIDYNAMIA *Angioſpermia.*
45	Antirrhinum Cymbalaria	
46	Antirrhinum Elatine	
47	Antirrhinum Linaria	
48	Digitalis purpurea	
49	Draba verna	TETRADYNAMIA *Siliculoſa.*
50	Thlaſpi Burſa Paſtoris	
51	Geranium cicutarium	MONADELPHIA *Decandria.*
52	Geranium robertianum	
53	Orobus tuberoſus	DIADELPHIA *Decandria.*
54	Ervum hirſutum	
55	Ervum tetraſpermum	
56	Hypericum pulchrum	POLYADELPHIA *Polyandria.*
57	Hypericum perforatum	
58	Leontodon Taraxacum	SYNGENESIA *Polygamia Æqualis.*
59	Lapſana communis	
60	Erigeron acre	SYNGENESIA *Polygamia Superflua.*
61	Senecio vulgaris	
62	Bellis perennis	
63	Viola odorata	SYNGENESIA *Monogamia.*
64	Viola hirta	
65	Viola tricolor	
66	Ophrys apifera	GYNANDRIA *Diandria.*
67	Aſplenium Scolopendrium	CRYPTOGAMIA *Filices.*
68	Polypodium vulgare	
69	Bryum ſcoparium	CRYPTOGAMIA *Muſci.*
70	Bryum undulatum	

INDEX II.

In which the Latin Names of the Plants are arranged Alphabetically.

	Plate
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Aſplenium Scolopendrium	67
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Bromus ſterilis	9
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Bellis perennis	62
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Conium maculatum	17
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Caltha paluſtris	40
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Digitalis purpurea	48
Dipſacus piloſus	10
Erica tetralix	21
Euphorbia Peplus	35
Euphorbia Helioſcopia	36
Euphraſia Odontites	44
Ervum hirſutum	54
Ervum tetraſpermum	55
Erigeron acre	60
Feſtuca fluitans	7
Geranium cicutarium	51
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Hottonia paluſtris	11
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Lychnis Flos Cuculi	33
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Polygonum Biſtorta	22
Polygonum Perſicaria	23
Polygonum Penſylvanicum	24
Polygonum var. caule maculato	25
Polygonum Hydropiper	26
Polygonum aviculare	27
Polygonum minus	28
Potentilla reptans	37
Polypodium vulgare	68
Ranunculus bulboſus	38
Ranunculus acris	39
Solanum Dulcamara	14
Scandix Anthriſcus	19
Saxifraga granulata	30
Sedum album	31
Sedum acre	32
Senecio vulgaris	61
Thymus Acinos	43
Thlaſpi Burſa Paſtoris	50
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INDEX III.

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Bryum curled	70
Bryum ſwan's-neck	71
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Stonecrop common yellow	32
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Tine-Tare ſmooth podded	55
Teasel ſmall	10
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Thyme baſil	43
Vernal-Grass ſweet-ſcented	4
Vervain	41
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Hypericum Pulchrum. Small upright St. John's Wort.

HYPERICUM *Linnæi Gen. Pl.* POLYADELPHIA POLYANDRIA.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

HYPERICUM floribus trigynis; calycibus ſerrato-glandulosis, caule tereti, foliis perfoliatis glabris. *Lin. Sp. Pl.* 1106.

HYPERICUM *pulchrum* Tragi. *J. Bauhin Hiſt.* III. 183. *Raii Synop.* 342.

HYPERICUM minus, erectum. *Bauhin Pin.* 279.

HYPERICUM foliis amplexicaulibus, cordatis, calycibus ovatis, ſerratis, glanduliferis. *Haller Hiſt. n.* 1041. *Gerard emac.* 540. *Hudſon Fl. Angl.* 290. *Oeder. Flor. Dan. Icon.* 75.

RADIX perennis.

CAULIS pedalis ad bipedalem, erectus, *teres*, *fig.* 1, glaber, ſubramoſus, geniculi diſtantes.

RAMI oppoſiti, breves, tenues, cauli ſimiles.

PEDUNCULI teretes, plerumque triflori.

FOLIA CAULIS *cordato-triangularia, glaberrima, amplexicaulia*, ſaturate viridia, patentia, quam in cæteris Hypericis ſolidiora, verſus marginem perforata, inferiora frequenter coccinea; RAMORUM ovata, caulis triplo minora; PEDUNCULORUM ovato-lanceolata.

CALYX: PERIANTHIUM quinquepartitum, LACINIIS ovatis, acutis, ſtriatis, margine ſerratis, *dentibus glanduliferis*, glandulis nigro rufis, *fig.* 2.

COROLLA: PETALA quinque, oblongo-ovata, flava, contorta, leviter, ſtriata, ſubtus aurantiaco lineata, margine ſubſerrata, et glandulis cincta, *fig.* 3.

STAMINA: FILAMENTA triginta ſex, filiformia in tres faſciculos ad baſin coalita, in ſingulo faſciculo duodecim: ANTHERÆ biloculares, ſubrotundæ: POLLEN *miniaceum*, *fig.* 4.

PISTILLUM: GERMEN ovatum: STYLI tres, longitudine germinis, divaricantes: STIGMATA parva, ſubrotunda, *fig.* 5.

PERICARPIUM: CAPSULA ſubconica, trilocularis, fuſca, *fig.* 6, 7.

SEMINA plurima, oblonga, fuſca, *fig.* 8.

ROOT perennial.

STALK from one to two feet high, upright, *round*, *fig.* 1. ſmooth, and thinly branched, the joints remote from each other.

BRANCHES oppoſite, ſhort, ſlender, and like the ſtalk.

PEDUNCLES round, generally ſuſtaining three flowers.

LEAVES of the STALK *triangularly heart-ſhaped, ſmooth, ſhining, embracing the ſtalk*, nearly horizontal, of a deep green colour, more ſolid to the touch than the other St. John's Worts, perforated near the edge, and frequently of a bright red colour towards the bottom; thoſe of the BRANCHES ovate, three times ſmaller than thoſe of the ſtalk; and thoſe of the PEDUNCLES lancet-ſhaped.

CALYX: a PERIANTHIUM divided into five Segments, the SEGMENTS oval, pointed, ſtriated, ſerrated, and *edged with little glands* of a blackiſh red colour, *fig.* 2.

COROLLA: five PETALS, oblong, oval, yellow, ſlightly ſtriated; on the under ſide tinged with a bright orange, ſlightly ſerrated, and edged with glands, *fig.* 3.

STAMINA: the FILAMENTS numerous, to thirty-ſix, filiform, uniting at bottom in three Faſciculi or Bundles, in each Faſciculus twelve; the ANTHERÆ roundiſh and bilocular, *fig.* 4; the POLLEN *bright ſcarlet.*

PISTILLUM: GERMEN ovate: three STYLES, the length of the Germen, ſpreading; the STIGMATA ſmall and roundiſh, *fig.* 5.

SEED-VESSEL: a CAPSULE ſomewhat conical, of a brown colour, with three cavities, *fig.* 6, 7.

SEEDS numerous, oblong, and brown, *fig.* 8.

The ancient Botaniſts gave this plant the name of *pulchrum* from its beauty; and LINNÆUS has very properly continued it. Many will, no doubt, think it deſerving of a place in their gardens. It is fond of a clayey ſoil, and woody ſituation, and is found in all the woods about town; as *Hornſey-Wood*, beyond *Iſlington*; *Oak of Honour Wood* (as it is generally called) a little beyond *Peckham*; *Charlton-Wood*, by *Greenwich*; likewiſe on *Hounſlow-Heath*. It flowers in the month of July, and continues but a ſhort time in bloſſom.

Its virtues, as a medicine, are probably the ſame with the common *St. John's Wort.*



Hypericum pulchrum.



Solanum Dulcamara.

SOLANUM DULCAMARA. WOODY NIGHTSHADE.

SOLANUM *Linnæi Gen. Pl.* PENTANDRIA MONOGYNIA.

Raii Syn. Gen. 16. HERBÆ BACCIFERÆ.

SOLANUM *Dulcamara* caule inermi fruteſcente flexuoſo, foliis ſuperioribus haſtatis, racemis cymoſis. *Lin. Sp. Pl. p.* 264.

SOLANUM Scandens ſeu Dulcamara, *Bauhin Pin. p.* 176. Amara Dulcis, *Gerard emac. p.* 350.

Solanum lignoſum, *Parkinſon p.* 350. *Raii Synopſis. p.* 265. *Hudſon Flor. Angl. p.* 78. *Scopoli Flor. Carniol. p.* 161. *Haller Hiſt. Plant. Helv. p.* 248.

RADIX perennis.

CAULIS fruticoſus, ſcandens, fiſtuloſus, ramoſus, tuberculis parvis ſubaſper, leniter anguloſus, orgyalis et ultra.

RAMI alterni, juniores purpurei.

FOLIA petiolata, mollia, venoſa, in caulem ſubdecurrentia, *inferiora* ovata-lanceolata, integerrima; *ſuperiora* trilobo-haſtata.

FLORES in CYMAS racemoſas diſpoſiti; pedunculi florales ad baſin bulboſi, aut ex acetabulo quaſi prodeuntes.

CALYX: PERIANTHIUM monophyllum, parvum, quinquefidum, purpureum, ſegmentis obtuſiuſculis, perſiſtens, *fig.* 1.

COROLLA monopetala, rotata: TUBUS breviſſimus; LIMBUS quinquepartitus, LACINIIS lanceolatis, purpureis, reflexis; FAUX nigra, nitida, ad baſin ſingulæ laciniæ maculæ duæ, virides, *fig.* 2, 3.

STAMINA: FILAMENTA quinque, breviſſima, tubo Corollæ inſerta, nigro purpurea. ANTHERÆ quinque, flavæ, erectæ, in tubum ſubconicum coalitæ, apicibus biforaminoſis, *fig.* 4, 5.

PISTILLUM: GERMEN pyriforme: STYLUS ſubulatus, Staminibus paulo longior: STIGMA ſimplex, obtuſum, *fig.* 6.

PERICARPIUM: BACCA ovata, coccinea, glabra, bilocularis, receptaculo utrinque convexo, cui ſemina adnectuntur, *fig.* 8.

SEMINA plurima luteſcentia, compreſſa, ſubreniformia, pulpo odoris ingrati obtecta, *fig.* 9.

ROOT perennial.

STALK woody, climbing, hollow, branched, thinly beſet with ſmall pointed tubercles, ſlightly angular, and growing to the height of ſix feet, or more.

BRANCHES alternate, the younger ones purple.

LEAVES ſtanding on foot-ſtalks, of an oval-pointed ſhape, ſoft, veiny, running ſlightly down the ſtalk, the *lower ones* entire, the *upper ones* halbert-ſhaped.

FLOWERS growing in branched CYMÆ, the proper peduncles of the flowers bulbous at their baſe, or growing out of a kind of ſocket.

CALYX: a PERIANTHIUM of one leaf, ſmall, and purple, divided into five ſegments, the ſegments bluntiſh, perſiſting, *fig.* 1.

COROLLA monopetalous, wheel-ſhaped: the TUBE very ſhort; the LIMB divided into five ſegments, the SEGMENTS lancet-ſhaped, purple, and turning back; the MOUTH black and ſhining; at the bottom of each ſegment are two roundiſh green ſpots, *fig.* 2, 3.

STAMINA: five FILAMENTS, very ſhort, of a black purple colour, and inſerted in the tube of the Corolla. Five ANTHERÆ, yellow, upright, and uniting into a tube, with two holes at the top of each, out of which the POLLEN is diſcharged, *fig.* 4, 5.

PISTILLUM: the GERMEN pear-ſhaped: the STYLE tapering, a little longer than the Stamina: the STIGMA ſimple and obtuſe, *fig.* 6.

SEED-VESSEL: an oval, ſcarlet, ſmooth BERRY, of two cavities, the receptacle to which the ſeeds is connected, is round on both ſides, *fig.* 8.

SEEDS ſeveral, flat, ſomewhat kidney-ſhaped, *fig.* 9, of a yellowiſh colour, encloſed in the pulp, which has a diſagreeable ſmell, *fig.* 9.

The *Woody Nightſhade* has been commended as a medicine for many diſtempers by the old Botaniſts, in their uſually laviſh manner: but PARKINSON ſays, he found the juice of it prove a very churliſh purge. LINNÆUS prefers an infuſion of the ſtalk of this plant to any of the foreign woods, as a cleanſer of the blood; and recommends it in inflammatory fevers, obſtructions, the itch, and rheumatiſm: and to render the knowledge of plants as extenſively uſeful as poſſible, he does not think it beneath him to remark, that the *Swediſh* Peaſants make hoops of the ſtalk of this plant to bind their wooden cans. RAY informs us, that the inhabitants of *Weſtphalia*, who are ſubject to the ſcurvy, make uſe of a decoction of the whole plant as their common drink, with ſucceſs againſt that diſtemper.

FLOYER ſays, that thirty berries of this plant killed a dog in leſs than three hours, and remained undigeſted in his ſtomach. As theſe berries, from their reſemblance, may happen by miſtake to be eaten for currants by children, it may not be improper to remark, that in ſuch a caſe, it is adviſable to pour down inſtantly, as much warm water as poſſible, to dilute the poiſonous juice, and provoke vomiting, till further aſſiſtance can be had.

Goats and ſheep are ſaid to feed on this plant: but our other cattle, *viz.* kine, horſes, and ſwine, refuſe it.

It grows plentifully in moiſt hedges, and blows from July to Auguſt. The berries are ripe in September and October. It is ſometimes found with a white flower.

ASPLENIUM *SCOLOPENDRIUM.* HARTS-TONGUE.

ASPLENIUM *Linnæi Gen. Pl.* CRYPTOGAMIA FILICES.

Raii Synop. Gen. HERBÆ CAPILLARES ET AFFINES.

ASPLENIUM frondibus ſimplicibus cordato-lingulatis integerrimis, ſtipitibus hirſutis. *Lin. Sp. Pl.* 1537.

ASPLENIUM Frondes lanceolatæ, acuminatæ, baſi cordatæ, integerrimæ, medio latiores. *Scop. Fl. Carn.*

ASPLENIUM petiolis hirſutis, folio longe lineari-lanceolato, integerrimo, circa petiolum exſciſſo. *Haller Hiſt. n.* 1665.

HEMIONITIS *Fuſchii. Icon.* 294.

PHYLLITIS vulgaris. *Cluſ. hiſt.*

SCOLOPENDRIA vulgaris Tragi.

LINGUA CERVINA officinarum. *Bauhin Pin.* 350. *Gerard emac.* 1138. *Parkinſon* 1046. *Raii Synop.* 116. *Hudſon Fl. Angl.* 384.

RADIX perennis, fibroſiſſima, fuſca, fibris fibrillis tenuiſſimis inſtructis.

STIPITES plures, piloſi.

FRONDES cordato-lingulatæ, longitudine pedales, latitudine fere bipollicares, glaberrimæ, margine undulato, nervo medio inferne piloſo.

FRUCTIFICATIO. Glomera linearia, obliqua, in pagina inferiore frondis nervo medio utrinque ſeriatim diſpoſita, *fig.* 1, 2, 3.

INVOLUCRUM. Squama linearis, bivalvis, longitudinaliter dehiſcens, *fig.* 2.

CAPSULÆ numeroſæ, ſubgloboſæ, uniloculares, pedicellatæ, annulo elaſtico cinctæ, *fig.* 5, 7, lente auctæ.

SEMINA numeroſa, ſubrotunda, minutiſſima, *fig.* 7, lente valde auctæ, *fig.* 8.

ROOT perennial, exceedingly fibrous, the fibres brown, and furniſhed with other fibres, which are very minute.

STALKS numerous and moſſy, or hairy.

LEAVES tongue-ſhaped, at bottom cordate, about a foot in length, and one inch and a half in breadth, of a bright yellowiſh green colour, and ſhining, the margin a little waved, and the midrib on the under ſide moſſy.

FRUCTIFICATION placed in oblique lines on the under ſide of the leaf, on each ſide of the midrib, *fig.* 1, 2, 3.

INVOLUCRUM a linear membrane or caſe, of two valves, opening longitudinally, *fig.* 2.

CAPSULES numerous, ſtanding on foot-ſtalks, nearly globular, ſurrounded by an elaſtic ring, and having one cavity, as they appear magnified, *fig.* 5, 7.

SEEDS roundiſh, very numerous and minute, *fig.* 7, as they appear through a great magnifier, *fig.* 8.

This is one of thoſe plants which ſome botanic writers have called *Epiphylloſpermæ*, from producing their ſeeds on the back of the leaves. LINNÆUS includes it in his claſs *Cryptogamia*, as neither ſtamina nor piſtilla have yet been diſcovered on it. The firſt appearance of fructification that we obſerve, are ſome little bags or caſes, of a yellowiſh or whitiſh green colour, placed in rows on the under ſide of the leaves, *fig.* 1, on opening of which, almoſt as ſoon as they become viſible, we find the capſules or ſeed-veſſels, *fig.* 2, very numerous, ſtanding upright, and cloſe together: at this time they appear of a green colour; as they approach towards maturity, they change this for a deep brown: the caſes then open lengthways in the middle, the two ſides, by the protruſion of the capſules, are turned quite back, and wholly diſappear, *fig.* 3. This membranous ſubſtance or caſe, may be conſidered as ſimilar to the *calyptra* in Moſſes, or *calyx* in other plants, and ſerves to ſecure and defend the tender ſeed and capſules, which being now become ripe, exhibit a moſt ſtriking proof of that wiſdom which the benevolent Author of Nature manifeſts in all the works of his creation.

Each capſule or ſeed-veſſel conſiſts of three parts; firſt the foot-ſtalk, *fig.* 4, which ſupports and connects them to the leaf; ſecondly, the jointed ſpring, *fig.* 5, which nearly ſurrounds the third part, or cavity containing the ſeeds, *fig.* 6, 7.

The ſeeds being ripe, the cavity containing them is forced open by the elaſticity of the jointed ſpring, and the ſeeds ſcattered and thrown to a conſiderable diſtance; one half of the cavity remains connected to one end of the ſpring, and the other half to the other end, *fig.* 7.

Some of the capſules being ſooner ripe than others, diſcharge their ſeed ſooner, ſo that it is a conſiderable time before they all become empty. On applying an entire row before the microſcope for the firſt time, I was immediately ſtruck with the motion that appeared in them, and afterwards found that the warmth of my breath occaſioned a great number of the capſules to keep continually diſcharging their ſeeds, ſo as almoſt to give them the appearance of ſomething alive. The cloſeneſs of the capſules one to another, affording me but a confuſed idea of their ſtructure, I ſeparated them with the point of a penknife, from their connection to the leaf, and again placed them before the microſcope, which then gave me a very different, and, after a little examination, a very clear idea of their ſtructure; many appeared with the ſeeds diſcharged, ſeveral in the act of diſcharging them, and ſome as yet entire; it frequently happened, that while I was intently looking at one which I expected would open, at the inſtant of diſcharging, it would be carried out of my ſight by the ſtrength and elaſticity of the ſpring; and it was not till after repeated trials, that I was able clearly to obſerve the manner of their opening. The ſeeds are very numerous, and ſcarcely viſible to the naked eye: when magnified, they appear of a roundiſh figure, and full of little projecting points.

Both GREW and SWAMMERDAM have given figures on this ſubject; but thoſe of SWAMMERDAM are by much the moſt natural. As a great deal of the ſatisfaction in viewing objects of this kind, depends on the kind, as well as goodneſs of the microſcope, that none of my readers may be diſappointed in the experiments they may make with this entertaining inſtrument, I may inform them, that the microſcope I make uſe of, is that which is ſold in the ſhops by the name of ELLIS's *Aquatic Microſcope*, and which is made for this purpoſe, with particular care and accuracy, by GEORGE ADAMS, of Fleet-Street, Mathematical Inſtrument Maker to his Majeſty.

This plant may be found in ſeed from September to November, in ſhady lanes and on walls, and is frequently found growing within-ſide of old wells. It is met with but rarely about town, though cultivated in moſt of our botanic gardens. The leaves are ſubject, from a richneſs of ſoil, to be much divided at their extremities, and very much curled at the edges.

It is an officinal plant, and is recommended by RAY, from his own experience, as a good medicine againſt convulſive diſorders.



Asplenium Scolopendrium.



Anagallis arvensis.

ANAGALLIS ARVENSIS. PIMPERNEL.

ANAGALLIS *Linnæi Gen. Plant.* PENTANDRIA MONOGYNIA.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI, FLORE MONOPETALO.

ANAGALLIS foliis indiviſis caule procumbente. *Lin. Spec. Plant.* 211.

ANAGALLIS phœniceo flore. *Bauhin. Pin.* 252.

ANAGALLIS mas. *Fuſchii.* 18. *Gerard emac.* 617. *Parkinſon* 558. *Oeder. Flor. Dan. tab.* 88. *Raii Syn.* 282. *Hudſon* 73. *Haller Hiſt.* 621, 626. *Scopoli Fl. Carniol.* 139.

RADIX ſimplex, fibroſa, annua.

CAULIS ramoſus, proſtratus, quadrangularis, lævis, ſubtortuoſus, *fig.* 1.

FOLIA oppoſita, ſeſſilia, cordata, glabra, *ſubtus punctis fuſcis notata.*

PEDUNCULI oppoſiti, foliis fere duplo longiores, inflexi.

CALYX perſiſtens, quinquepartitus, ſegmentis triangularibus, alatis, membranaceis, *fig.* 2.

COROLLA monopetala, quinquepartita, laciniis rotundis, coccineis, ad baſin purpureis, margine crenatis, ſubpiloſis, *fig.* 3, 4.

STAMINA: FILAMENTA quinque, erecta, *piloſiſſima, (pili articulati!)* ſuperne purpurea: ANTHERÆ oblongæ, biloculares, flavæ, inſidentes, *fig.* 5, 6.

PISTILLUM: GERMEN rotundum: STYLUS filiformis, *obliquus*, longitudine filamentorum: STIGMA ſubrotundum, *extra circulum ſtaminum locatum, fig.* 7.

PERICARPIUM: CAPSULA rotunda, nitida, quinquenervis, ſubdiaphana, circumciſſa, fuſca, *fig.* 8.

SEMINA plurima, anguloſa, fuſca, *fig.* 9.

ROOT ſimple, fibrous, and annual.

STALK branched, procumbent, quadrangular, ſmooth, and a little twiſted, *fig.* 1.

LEAVES oppoſite, ſeſſile, heart-ſhaped, ſmooth, *underneath dotted with brown.*

PEDUNCLES oppoſite, nearly twice the length of the leaves, bending downwards.

CALYX perſiſting, divided into five ſegments, the ſegments triangular, and membranous at the edges, *fig.* 2.

COROLLA monopetalous, quinquepartite, the laciniæ ſcarlet, purpliſh at bottom, the edges ſlightly notched, and hairy, *fig.* 3, 4.

STAMINA: five FILAMENTS, upright, and *very hairy, (the hairs, when magnified, jointed!)* at top purpliſh: the ANTHERÆ oblong, bilocular, yellow, and ſitting on the filaments, *fig.* 5, 6.

PISTILLUM: the GERMEN round: the STYLE filiform, the length of the filaments: the STIGMA roundiſh, *placed without the circle of the Stamina, fig.* 7.

SEED-VESSEL, a CAPSULE, round, ſhining, brown, ſlightly tranſparent, having five nerves, dividing tranſverſly into two equal parts, *fig.* 8.

SEEDS numerous, brown, and angular, *fig.* 9.

Nature ſeems to have taken uncommon pains in the formation of the flowers of this little plant; few poſſeſs more livelineſs of colour, or greater delicacy of ſtructure; this muſt be ſufficiently obvious to every common obſerver; but when its minute parts come to be viewed by the microſcope, we are charmed with beauties altogether novel and unexpected; we then find that the edges of the flowers, which to the naked eye appear a little uneven or hairy, are furniſhed with a number of little glands, placed on foot-ſtalks; and that the hairs of the filaments, which partly tend to diſtinguiſh this genus, are regularly jointed: the piſtillum, which generally riſes upright betwixt the ſtamina, is here inclined to one ſide, ſo that the ſtigma is placed without the circle of the ſtamina. The care which nature has taken likewiſe in the preſervation of theſe delicate parts from the injury of the weather, is not leſs remarkable. Every morning, if the weather be fair and warm, the bloſſoms fully expand; but if rain falls, or there be much moiſture in the air, the flowers quickly cloſe themſelves up, to ſecure the encloſed antheræ and ſtigma, from having their functions deſtroyed. From this property, which it has in common with many plants of the ſame claſs, it has acquired the name of the *Shepherd's*, or *Poor Man's Weather-glaſs*—they have remarked, that if the flowers be open in a morning, it will prove a fine day, if ſhut, the contrary.

The ſmall Birds *(Paſſeres Linnæi)* are fond of the ſeeds of this plant: and according to experiments made by ſome of LINNÆUS's pupils, it appears that Kine and Goats feed on it.

It is very common in gardens and corn-fields, flowering all the Summer.

A variety with four leaves at a joint, ſometimes occurs in a rich ſoil; but as it differs in no other part, and is a mere variety, it ſcarcely deſerves a diſtinct figure. It is alſo found with blue, and ſometimes with white flowers: but we have not obſerved either of theſe varieties near London.

Butomus Umbellatus. Flowering Ruſh, or Water Gladiole.

BUTOMUS *Linnæi Gen. Pl.* ENNEANDRIA HEXAGYNIA.

Raii Syn. Gen. 17. HERBÆ MULTISILIQUÆ SEU CORNICULATÆ.

BUTOMUS *umbellatus. Linn. Spec. Plant. p.* 532.

JUNCUS floridus major. *Bauhin Pin. p.* 12.

GLADIOLUS paluſtris Cordi. *Gerard emac. p.* 29.

Raii Syn. ed. 3. *p.* 273. *Hudſon Fl. Angl. p.* 152. *Scopoli Flor. Carn. ed.* 2. *p.* 283. *Haller Hiſt. Pl. Helv. vol.* 2. *p.* 81.

RADIX perennis, alba, tuberculoſa, tranſverſa, edulis? ex inferiore parte radiculas prælongas dimittens.

ROOT perennial, white, knobby, tranſverſe, eatable? from its under ſide ſending down a great number of very long fibres.

SCAPUS pedalis ad orgyalem, teres, glaber.

STALK round, ſmooth, from one to five or ſix feet high, according to its place of growth.

FOLIA triquetra, ſpongioſa, *fig.* 1, ſcapo breviora, ad baſin ſpathacea, apicibus compreſſis, tortuoſis.

LEAVES triangular, ſpongy, *fig.* 1, ſhorter than the ſtalk, at bottom ſheathy, at top flat, and twiſted.

FLORES in UMBELLA, ad triginta; pedunculi digitales, e vaginis membranaceis prodeuntes.

FLOWERS numerous, to thirty, each on a ſingle peduncle of about a finger's length, forming an UMBELL, ſurrounded at bottom by withered membranous ſheaths.

CALYX: INVOLUCRUM triphyllum, foliolis lanceolatis, marceſcentibus.

CALYX: an INVOLUCRUM of three leaves, ſpear-ſhaped, and withered.

COROLLA: PETALA ſex, inæqualia, ſubrotunda, concava, roſea, *fig.* 2, alternis minoribus, acutioribus, *fig.* 3.

COROLLA: compoſed of ſix PETALS, which are roundiſh, concave, and moſt commonly of a bright red, *fig.* 2: the three exterior ſmaller, and more pointed, *fig.* 3.

STAMINA: FILAMENTA novem, ſubulata, *fig.* 4, 5. ANTHERÆ inſidentes, dum pollinem involvunt oblongæ, rubræ, quadriſulcatæ, mucrone brevi terminatæ, *fig.* 6, 7, emiſſo polline ſubcordatæ, compreſſæ, bilamelloſæ, *fig.* 4: POLLEN flaviſſimum.

STAMINA: nine FILAMENTS, tapering, *fig.* 4, 5. ANTHERÆ ſitting on the filaments, before the ſhedding of the Pollen, oblong, reddiſh, having four grooves, and terminated by a ſhort point, *fig.* 6, 7, appearing afterwards ſomewhat heart-ſhaped, flat, and as if compoſed of two lamellæ, *fig.* 4: the POLLEN is of a bright yellow colour.

PISTILLUM: GERMEN ſubtriangulare, latere exteriore latiore, convexo, *fig.* 9, 10: STYLI ſex ſubulati, *fig.* 8; STIGMA canaliculatum.

PISTILLUM: the GERMEN nearly triangular, the outer ſide broad and roundiſh, *fig.* 9, 10: ſix STYLES, tapering: the STIGMA has a ſmall channel in it, which afterwards ſpreads into two lips, *fig.* 11, 12.

PERICARPIUM: CAPSULÆ ſex, oblongæ, attenuatæ, erectæ, univalves, apice bilabiatæ, introrſum dehiſcentes, *fig.* 11, 12.

SEED-VESSEL; ſix CAPSULES, oblong, tapering, upright, of one valve, opening inwards, *fig.* 11, 12.

SEMINA plurima, minuta, oblonga, fuſca, *fig.* 13.

SEEDS numerous, ſmall, oblong, brown, *fig.* 13.

We find this ſtately plant, in and by the ſides of our watery ditches, flowering from July to September. A few years ſince, it was found growing in *St. George's Fields;* but the improvements making in that, and other parts adjacent to London, now oblige us to go further in ſearch of this, and many other curious plants. About the *Iſland* of *St. Helena*, near *Deptford*, and in the Marſhes by *Blackwall*, it is found in great abundance, although very ſcarce in many other parts of *Great-Britain*. Fiſh ponds, or other pieces of water, would derive great beauty from the introduction of this elegant native of our Iſle; the handſome appearance of which, did not eſcape our countryman, old GERARD, who deſcribes it thus: "The Water Gladiole, or "Graſſy Ruſh, of all others, is the faireſt and moſt pleaſant to behold, and ſerveth very well for the decking "and trimming up of houſes, becauſe of the beautie and braverie thereof."——That accurate obſerver RAY, deſcribes its nine *Stamina*, although in his time, they were not viewed in that conſequential light which they are in our preſent Syſtems of Botany. It is the only plant of the claſs *Enneandria*, which grows wild in this kingdom. If vegetables were claſſed according to their natural affinities, this would rank among the Lilies. Cattle do not eat it. It is ſo hardy as to bear the cold of *Lapland*.

Butomus — *Umbellatus.*



Lonicera Periclymenum.

Lonicera *Periclymenum.* Honeyſuckle, or Woodbine.

LONICERA *Linnæi Gen. Pl.* PENTANDRIA MONOGYNIA.

Raii Synopſis. ARBORES ET FRUTICES FRUCTU FLORI PETALOIDI CONTIGUO.

LONICERA capitulis ovatis imbricatis terminalibus, foliis omnibus diſtinctis. *Lin. Sp. Pl.* 247.

PERICLYMENUM *Fuſchii. Icon.* 646.

PERICLYMENUM non perfoliatum Germanicum. *Bauhin Pin.* 302.

CAPRIFOLIUM Germanicum. *Dodon. Gerard emac.* 891. *Parkinſon.* 146. *Raii Syn.* 458. *Hudſon Fl.* 80. *Haller Hiſt.* 301. *Scopoli Fl. Carniol. p.* 153.

CAULIS lignoſus, volubilis, orgyalis et ultra; cortice pallide fuſco; RAMI oppoſiti, purpurei.

FOLIA oppoſita, ovata, glabra, ſubtus cæruleſcentia.

FLORES terminales, verticillatim diſpoſiti, patentes, rubri, interne flavi, odoratiſſimi.

CALYX: PERIANTHIUM ſuperum, breviſſimum, quinquepartitum; ſegmentis ovato-lanceolatis, erectis, duobus inferioribus remotioribus, *fig.* 1.

BRACTEÆ ſubcordatæ, *fig.* 8, germina imbricatim cingentes, ad marginem præcipue ſcabræ, ut ſunt calyx, et tubi baſis pilis glanduliferis.

COROLLA monopetala, tubuloſa; TUBUS oblongus, ſubinfundibuliformis; LIMBUS bipartitus, laciniis revolutis, ſuperiore quadrifida, ſegmentis fere æqualibus, obtuſis, inferiore integra, *fig.* 2.

STAMINA: FILAMENTA quinque filiformia, corolla longiora, alba, tubo corolla inſerta, *fig.* 3: ANTHERÆ dum pollinem involvunt oblongæ, incumbentes, poſtea lunatæ, *fig.* 4.

PISTILLUM: GERMEN ſubrotundum, inferum, *fig.* 5. STYLUS filiformis, Staminibus paulo longior, *fig.* 6: STIGMA capitatum, ſubrotundum, trifidum, viride, *fig.* 7.

PERICARPIA: BACCÆ plures, ſubrotundæ, rubræ, umbilicatæ, biloculares, omnes diſtinctæ, *fig.* 9.

SEMINA plura, luteſcentia, hinc convexa, inde plana, *fig.* 10.

STALK woody, twining, growing to the height of ſix feet or more, the bark a pale brown, the BRANCHES oppoſite and purple.

LEAVES oppoſite, oval, ſmooth, underneath of a bluiſh colour.

FLOWERS terminal, growing in a whirl, and ſpreading, externally red, internally yellow, and fragrant.

CALYX: a PERIANTHIUM placed above the Germen, very ſhort, divided into five ſegments, which are of an oval-pointed ſhape, and upright, the two inferior ones moſt remote from each other, *fig.* 1.

FLORAL-LEAVES laying one over the other, and cloſely embracing the Germina, reddiſh at the edges, and covered, as well as the Calyx and baſe of the tube, with glandular hairs, *fig.* 8.

COROLLA monopetalous and tubular, the TUBE long, and ſomewhat funnel-ſhaped; the LIMB bipartite; the laciniæ rolling back, the upper one divided into four blunt and nearly equal ſegments, the lower one entire, *fig.* 2.

STAMINA: five white FILAMENTS, of an equal thickneſs throughout, longer than the Corolla, and inſerted into its tube, *fig.* 3: the ANTHERÆ, while they contain the Pollen, oblong, afterwards ſemilunar, and of a yellow colour, *fig.* 4.

PISTILLUM: the GERMEN roundiſh, and placed below the Calyx, *fig.* 5: the STYLE filiform, a little longer than the Stamina, *fig.* 6: the STIGMA roundiſh, trifid, and of a green colour, *fig.* 7.

SEED-VESSELS: ſeveral roundiſh red BERRIES having the remains of the Calyx adhering to them, and all diſtinct, *fig.* 9.

SEEDS ſeveral, of a yellowiſh brown colour, round on one ſide, and flattiſh on the other, *fig.* 10.

The early writers attributed virtues to this officinal plant, which the latter have been inclined to give up. As a medicine we muſt not expect much from it: but the beauty, ſingularity, and exquiſite fragrance of its flowers, have long given it a place in our gardens. It is a climber, and turns from Eaſt to Weſt with moſt of our other Engliſh climbers, and in common with them, it bears clipping and pruning well: for in a ſtate of nature, thoſe plants that cannot aſcend without twining round others, are often liable to loſe large branches; they have, therefore, a proportional vigour of growth to reſtore accidental damages. This plant is ſubject, when placed near buildings, to be disfigured and injured by ſmall inſects, called Aphides, or, vulgarly, blights: theſe animalculæ were formerly ſuppoſed to be brought by the eaſt wind, and conſequently the miſchief was looked upon as inevitable; but obſervation has of late years corrected that error: their * hiſtory is well known; but no effectual remedy againſt them is as yet diſcovered. Theſe inſects are not very numerous in ſpring, but as the ſummer advances, they increaſe in a ſurpriſing degree: to preſerve the plant therefore from injury, it is neceſſary to watch their firſt attacks, cut off and deſtroy the branches they firſt appear on; for when they have once gained ground, they are defended by their numbers. We have ſeen ſmall plants cleared of them, by ſprinkling Spaniſh ſnuff on the infected branches; but for large trees, this remedy is ſcarcely practicable. The leaves are likewiſe liable to be curled up by a ſmall caterpillar *(Phalæna Tortrix, Linnæi.)* which produces a beautiful little moth: ſee ALBIN's hiſtory of Engliſh Inſects, pl. 73. It is fed on by kine, goats, and ſheep, but horſes refuſe it.

To ſhew the confuſion of ancient names, it may not be improper to obſerve, that this plant and Woodroffe, *(Aſperula odorata)*, have been both called *Matriſylva* by the old botanic writers. Our poets, alſo, have ſtrangely confounded the names of this plant. SHAKESPEAR ſays,

> " *So doth the* Woodbine *the ſweet* Honeyſuckle
> " *Gently entwiſt.*"

MILTON ſeems to call this plant *Eglantine,* although that is an undoubted name for the *Sweet Briar.*

> " *Through the* Sweet Briar, *or the Vine,*
> " *Or the* twiſted Eglantine."

We find it plentifully in woods and hedges, flowering from July to September. Such plants as grow in ſhady places, produce bloſſoms of a paler colour, and they univerſally ſmell ſweeteſt in the evening; at which time ſome particular ſpecies of *Sphinges (Linnæi.)* or *Hawk Moths,* are frequently obſerved in gardens hovering over the bloſſoms, and with their long tongues, which are peculiarly adapted to the purpoſe, extracting honey from the very bottom of the flowers.

Vid. REAUMUR and GEOFFROY.

DRABA VERNA. VERNAL DRABA or WHITLOW GRASS.

DRABA *Linnæi Gen. Pl.* TETRADYNAMIA SILICULOSA.

Raii Synop. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

DRABA *verna* ſcapis nudis, foliis ſubſerratis. *Lin. Syſt. Vegetab. p.* 489. *Flor. Suec. p.* 223.

DRABA cauliculis nudis, foliis ſubhirſutis, ſubdentatis. *Haller. hiſt. helv.* 1. 215.

BURSA PASTORIS minor loculo oblongo. *Bauhin Pin.* 108. 2.

PARONYCHIA vulgaris. *Gerard emac.* 624. *Raii Syn.* 292. *Hudſon Fl. Angl.* 243. *Scopoli Flor. Carniol. n.* 792.

RADIX fibroſa, annua.

CAULES nudi, palmares, 1 ad 5 aut plures in ſolo fertili ex eadem radice naſcuntur.

FOLIA ovato-lanceolata, baſi anguſtiora integra et ſubſerrata (ſerra niſi unica aut duo, raro plures) ſuper terram expanſa, ſcabriuſcula, hirſuta, pili bi-trifurci.

PEDUNCULI alterni, uniflori.

CALYX: PERIANTHIUM tetraphyllum, foliolis erectis, concavis, gibbis, obtuſis, ſubhirſutis, *fig.* 1.

COROLLA tetrapetala, petala alba, calyce duplo longiora, bipartita, *fig.* 2.

STAMINA: FILAMENTA ſex, incurvata, quorum 4 longitudine Piſtilli 2 breviora; ANTHERÆ flavæ, *fig.* 3, 4.

PISTILLUM: GERMEN ovatum, compreſſum; STYLUS vix ullus; STIGMA capitatum, planum, *fig.* 5.

PERICARPIUM: SILICULA ovata, compreſſa, brevi mucrone obtuſo terminata, bilocularis, bivalvis, valvulis plano-concavis, *fig.* 6.

SEMINA plura, ovata, fuſca, margini DISSEPIMENTI affixa, *fig.* 8, 9.

ROOT fibrous and annual.

STALKS naked, about three inches high, one to five and frequently more, if the ſoil be rich, ſpring from the ſame root.

LEAVES of an oval pointed ſhape, narrower at bottom, ſome of them entire, and others a little ſerrated, or indented (ſeldom more than one or two indentations in a leaf) ſpreading on the ground, roughiſh, hirſute, ſome of the hairs bifurcate, others trifurcate.

PEDUNCLES alternate, uniflorous.

CALYX: a PERIANTHIUM of four leaves, which are upright, hollow, gibbous, obtuſe, and ſomewhat hairy, *fig.* 1.

COROLLA tetrapetalous, the petals white, twice the length of the calyx, and bipartite, *fig.* 2.

STAMINA: ſix FILAMENTS which bend inward, 4 long, the height of the Piſtillum, and 2 ſhort; the ANTHERÆ yellow, *fig.* 3, 4.

PISTILLUM: the GERMEN oval and flat; STYLE ſcarce any; STIGMA a ſmall head, flat at top, *fig.* 5.

SEED-VESSEL a ſhort oval pod, flat, and terminated by a ſhort blunt point, having two cavities and two valves, the valves ſlightly concave, *fig.* 6.

SEEDS ſeveral, oval, brown, fixed to the edge of the DISSEPIMENT or partition, *fig.* 8, 9.

On walls, dry banks, and in barren fields, the white bloſſoms of this diminutive plant are very conſpicuous in the months of March and April, a ſeaſon when any kind of bloſſom is viewed with pleaſure, as it cannot fail to excite the pleaſing reflection that the ſeaſon is approaching when

" All that is ſweet to ſmell, all that can charm
" Or eye or ear, burſts forth on every ſide,
" And crouds upon the ſenſes."

Linnæus informs us, that in Smoland, a province of Sweden, they ſow their rye when this plant is in bloſſom, and that in the night-time and in wet weather its flowers droop.

Galen ſays, that *Paronychia* or *Whitlow-Graſs* has its name from its properties, for it heals whitlows; but commentators are much in doubt concerning the plant itſelf. From the account of the ancients it appears, that it is a different plant from what we are now deſcribing; ſome have fixed on Wall Rue (ASPLENIUM *Ruta Muraria*); others on a plant reſembling Spurge: ſuch is the confuſion that ariſes from imperfect deſcriptions.



Draba verna



Poa annua

Kilburn pinxit et fecit.

POA ANNUA. COMMON DWARF POA.

POA *Linnæi Gen. Plant.* TRIANDRIA DIGYNIA.
Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.
POA *annua*, panicula diffuſa, angulis rectis, ſpiculis obtuſis, culmo obliquo compreſſo. *Lin. Syſt. Vegetab. p.* 97. *Spec. Plant. ed.* 3. *p.* 99. *Fl. Suec. p.* 228.
POA culmo infracto, panicula triangulari, locuſtis trifloris glabris. *Haller. hiſt. vol.* 2. *p.* 223.
GRAMEN pratenſe paniculatum minus. *Bauhin. Pin. p.* 2.
GRAMEN pratenſe minimum album et rubrum. *Gerard. emac.* 3. *Parkinſon.* 1156.
GRAMEN pratenſe minus ſeu vulgatiſſimum. *Raii Synop.* 408. *Hudſon. Fl. Angl. p.* 34. *Scopoli. Fl. Carniol.* 71. *Stillingfleet. tab.* 7.

RADIX annua, fibroſiſſima.
CULMI plures, ceſpitoſi, ſemiprocumbentes, in pratis vero inter alias plantas creſcentes, ſuberecti, paululum infracti, ſemipedales.

VAGINÆ compreſſæ, ancipites, læves.
FOLIA plurima, brevia, carinata, glabra, ſæpe tranſverſim rugoſa, margine minutiſſime aculeata, *fig.* 8.
PANICULA triangularis, ſubcompreſſa, flores ſubſecundi.
PEDUNCULI *univerſales* ad baſin paniculæ plerumque *bini*, altero breviore, in medio frequenter *terni*, apice vero *ſolitarii*; anguli nunc recti, nunc obliqui.

SPICULÆ ovato-acutæ, compreſſæ, utrinque acutæ, triflorae, quadriflorae, *fig.* 2.

CALYX: GLUMA bivalvis, valvulis concavis, inæqualibus, *fig.* 1.
COROLLA bivalvis, valvulis villoſis, margine membranaceis, albidis, una majore, concava, obtuſiuſcula; alterâ minore, anguſtiore, *fig.* 3.
STAMINA: FILAMENTA tria capillaria; ANTHERÆ flaveſcentes, bifurcatæ, *fig.* 4.
PISTILLUM: GERMEN ovatum, STYLI duo ramoſiſſimi, pellucidi, *fig.* 5.
SEMEN ovatum, corolla adnaſcente tectum, ad baſin villoſulum, *fig.* 7.

ROOT annual and very fibrous.
STALKS numerous, forming a turf, ſemiprocumbent, but in meadows when growing among other plants, nearly upright, a little crooked, and about half a foot high.
SHEATHS flat, two-edged, and ſmooth.
LEAVES very numerous, ſhort, keel-ſhaped, ſmooth, frequently wrinkled tranſverſely, the edge very finely ſerrated, *fig.* 8.
PANICLE of a triangular ſhape and flattiſh, the flowers growing moſtly to one ſide.
PEDUNCLES: the *univerſal peduncles* generally proceed from the bottom of the panicle in *pairs*, one of which is ſhorter than the other, from the middle often by *threes*, and at top *ſingly*; forming angles ſometimes ſtraight, ſometimes oblique.
SPICULÆ oval and pointed, flattiſh and ſharp on both ſides, containing three and four flowers, *fig.* 2.
CALYX: a GLUME of two valves, the valves hollow and unequal, *fig.* 1.
COROLLA of two valves, the valves villous, membranous and whitiſh at the edges, the one larger, hollow, and bluntiſh, the other ſmaller and narrower, *fig.* 3.
STAMINA: the FILAMENTS very minute, the ANTHERÆ yellowiſh and forked, *fig.* 4.
PISTILLUM: the GERMEN oval, two STYLES exceedingly ramified and pellucid, *fig.* 5.
SEED oval, covered by the corolla, which adheres to it at bottom, ſlightly villous, *fig.* 7.

The laudable Society eſtabliſhed in London for the encouragement of Manufactures, Arts, and Commerce, ſenſible of the improvements which might be made in Agriculture, from a more general introduction of the moſt uſeful Engliſh *Graſſes*, have offered premiums to ſuch as ſhall give the beſt account of their cultivation; and the *Poa Annua* above deſcribed, is one of thoſe they have ſelected, from its appearing to them to be one of the moſt uſeful.

Mr. Stillingfleet obſerves, that it makes the fineſt turf; that he has ſeen in high Suffolk whole fields of it, without any mixture of other Graſſes; and that, as ſome of the beſt ſalt butter we have in London comes from that county, he apprehends it to be the beſt Graſs for the dairy; from obſerving likewiſe, that this Graſs flouriſhed much more from being trodden on, he concludes that frequent rolling muſt be very ſerviceable to it.

There is no Graſs better entitled to Ray's epithet of *Vulgatiſſimum* than this, as it occurs almoſt every where, in meadows, gardens, at the ſides of paths, and on walls: when it grows in a very dry ſituation, it frequently doth not exceed three inches; but in rich meadows it often grows more than a foot in height. The panicle is frequently green; but in open fields it acquires a reddiſh tinge. It flowers all the ſummer long, and even in winter, if the weather be mild.

It appears to be the firſt general covering which Nature has provided for a fruitful ſoil, when it has been diſturbed; for which reaſon, in walks, pavements, or pitching, it may be conſidered as one of the moſt troubleſome of weeds; the moſt expeditious method of deſtroying it, would probably be by pouring boiling water on it.

All the authors that have deſcribed this Graſs call it annual: it differs, however, very conſiderably from the other annual Graſſes; they throw up their ſpikes or panicles, produce their flowers and ſeeds, and then die away; this, on the contrary, keeps continually throwing out new ſhoots, and producing new flowers and ſeeds, and if the ground be moiſt, a ſingle plant will remain growing in this manner throughout the year, ſo that we generally find on the ſame plant young ſhoots and ripe ſeeds.

"*Hic ver aſſiduum atque alienis menſibus æſtas.*"

Perhaps this is the only vegetable we have that in this circumſtance imitates the Tropical plants.

Although its ſeed may be gathered the whole ſummer long, yet about the latter end of May it will be found in the greateſt plenty. Experience muſt determine the beſt method in which this Graſs ſhould be cultivated, whether by ſowing its ſeed, or dividing and tranſplanting the Graſs itſelf; as this ſeed would with more difficulty be procured in large quantities than that of many others, and as a ſingle tuft of this Graſs may be divided into a vaſt number of young plants, probably tranſplanting it in wet weather would be the moſt eligible mode of cultivation.

Theſe obſervations are ſubmitted to the conſideration of the Farmer, and Gentlemen of landed property who reſide in the country, and who have both leiſure and opportunity to try experiments of this kind. Although the author's province more particularly is to deſcribe and figure theſe plants in ſuch a manner as to make them as obvious as poſſible, yet he would be exceedingly happy to communicate to the public any improvements which may be made in this or any other branch of Agriculture, that he may be favoured with.

HYPNUM PROLIFERUM. PROLIFEROUS HYPNUM.

HYPNUM *Linnæi Gen. Pl.* CRYPTOGAMIA MUSCI.

Raii Syn. Gen. 3. MUSCI.

HYPNUM *proliferum* ſurculis proliferis, plano-pinnatis, pedunculis aggregatis. *Linnæi Syſt. Veg. p.* 800.

HYPNUM ramis teretibus pinnatis, pinnulis pinnatis, foliis adpreſſis. *Haller. Hiſt.* 3. *p.* 33.

HYPNUM filicinum, Tamariſci foliis minoribus, non ſplendentibus. *Dillen. p.* 276. *icon.* 35. *fig.* 14.

HYPNUM repens filicinum minus, luteo virens. *Catal. Giſs.* 287. *Raii Synop. p.* 86. *n.* 36. *Hudſon. Fl. Angl. p.* 422. *Weis Cryptogam. p.* 230.

CAULES palmares ad dodrantales, repentes, hinc inde radiculas fuſcas exſerentes, ſæpe vero adeo intricate connexi ut humi ſerpere nequeant, foliis ovato-acuminatis, carinatis, mucronatis, ſparſe tectis, *fig.* 1. horum foliolorum ſuperficies, microſcopio valde aucta granuloſa apparet, *fig.* 2.

STALKS from three to nine inches in length, creeping on the ground, and here and there ſending forth ſmall brown fibres, but very often ſo intricately connected together as to be hindered from creeping, thinly covered with leaves of an oval pointed ſhape, having a ſtrong midrib, which runs out to a fine point, *fig.* 1. when greatly magnified, the ſurface of theſe leaves exhibits a granulated appearance, *fig.* 2.

RAMI pulchre pinnati, deflexi, vireſcentes, ad luteum colorem plus minuſve accedentes pro ratione ſitus aut anni temporis, *omni ſplendore deſtituti, rachis concolor*, ad extremitatem plerumque incraſſatus. RAMULI et PINNULÆ foliolis exiliſſimis, confertis, nudo oculo vix conſpicuis imbricatim tecti; e diſco rami, aut frondis, novus caulis aut ſurculus plerumque exſurgit, unde plantula mire extenditur ac propagatur, et hinc *Proliſer* vocatur.

BRANCHES beautifully pinnated, and bending downward, of a green colour, more or leſs inclined to yellow, according to its place of growth, and the ſeaſon of the year, *without any gloſs*; the *midrib of the ſame colour with the leaves*, and generally thicker at its extremity; the ſmall leaves laying one over another, and ſcarce diſcernible to the naked eye. From the middle of the branch or Frons moſt commonly ariſes a new ſtalk, or ſurculus, by which means this plant is ſingularly extended and propagated, and from this circumſtance it acquires the name of *Proliferous*.

PEDUNCULI ſeſquiunciales, rubri, plerumque quatuor aut quinque, aliquando plures e caule aggregatim aſſurgunt, et in quibuſdam caulibus, *Perichætia* plura aut potius eorum rudimenta occurrunt, e quibus pedunculi ſequente anno probabiliter naſcuntur. PERICHÆTIUM, *fig.* 3. aut baſis pedunculi, ovatum, foliolis tenuibus pilo longo flexuoſo terminatis veſtitum. CAPSULÆ ſive ANTHERÆ, *fig.* 4. quæ ſemen aut pollinem continent, incurvatæ, ex fuſco aurantiacæ. OPERCULUM, *fig.* 6. (quod collo capſulæ infigitur, et ſemine matureſcente decidit) breve, et acuminatum. Orificium Capſulæ duplici ſerie Ciliarum inſtruitur, *fig.* 8, 9. CILIÆ exteriores, *fig.* 8. aurantiacæ, divergentes, apicibus aliquando paululum inflexis, et cum aridæ ſint fragiles; interiores, *fig.* 9. convergentes, membrana reticulata connexæ, ad quam videndam microſcopio opus eſt. POLLEN ſive SEMEN viride. CALYPTRA, *fig.* 5. quâ anthera cum ſuo Operculo partim tegitur et quæ primum decidit albida eſt.

PEDUNCLES about an inch and a half in length, of a bright red colour, generally about four or five, ſometimes more, ſpring from the ſtalk nearly together; in ſome of the ſtalks there is the appearance of ſeveral *Perichætia* without peduncles, which probably ariſe from them the next year. The PERICHÆTIUM, *fig.* 3. which is the baſe of the peduncle, is of an oval ſhape, and covered with ſmall leaves which terminate in a long flexible point. The CAPSULES or ANTHERÆ containing the pollen or ſeed, *fig.* 4. are incurvated, and of a brown orange colour. The OPERCULUM, *fig.* 6. (which ſits on to the top of the Capſule, and when the ſeed contained within it is ripe, falls off) is ſhort and pointed; the mouth of the Capſule has two rows of CILIÆ, *fig.* 8, 9. the exterior row, *fig.* 8. orange coloured and diverging, the tops of them ſometimes bending a little inward, and brittle when dry, the interior row, *fig.* 9. converging, of a membranous texture, and when very much magnified, appearing reticulated. The POLLEN or SEED contained within the Capſules is green. The CALYPTRA, *fig.* 5. which partly covers the anthera and operculum, and firſt drops off, is of a white colour.

There is ſcarcely a wood in the environs of this city, on the borders of which this elegant ſpecies of Moſs doth not occur.

It produceth its fructifications from December to February; in this ſtate, however, it is but ſeldom met with, yet may be found by diligent ſearching. Linnæus, in one of his journies through Sweden, obſerved this Moſs growing in the thickeſt woods, obſcured with perpetual ſhade, and where all other plants periſhed.

Moſt of the writers, who have made this claſs of plants more particularly the object of their inquiries, have generally made two diſtinct Genera of the Hypnum and Bryum, yet ſo great is the affinity betwixt them, and ſo much do they run into one another, that what ſome of theſe authors call a Bryum, others denominate a Hypnum; indeed this diviſion ſeems adopted more to facilitate the inveſtigation of the plants of this numerous family, than from any real natural diviſion which takes place between them. The difference between ſome of the Hypnums and ſome of the Bryums is obvious to almoſt every one, but to aſcertain the limits where the one begins and the other terminates, ſeems a taſk too difficult for the moſt accurate Botaniſt.

The principal characteriſtics of a Bryum, according to Linnæus, are, that the peduncle which ſuſtains the Anthera or Capſule, grows out of the top of the ſurculus or ſtalk, and is furniſhed at its baſe with a little naked tubercle or bulb; in the Hypnum, on the contrary, the peduncle grows out of the ſide of the ſtalk, and the tubercle at its baſe is covered with leaves and called a Perichætium.

Hypnum Proliferum.



Feldwen



Hypericum Perforatum

HYPERICUM PERFORATUM. COMMON St. JOHN'S WORT.

HYPERICUM *Linnæi Gen. Pl.* POLYADELPHIA POLYANDRIA.

Raii Synop. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

HYPERICUM *perforatum*, floribus trigynis, caule ancipiti, foliis obtuſis pellucido-punctatis. *Linnæi Syſt. Vegetab. p.* 584. *Fl. Suecic. n.* 680.

HYPERICUM caule tereti, alato, ramoſiſſimo; foliis ovatis, perforatis. *Haller hiſt.* vol. 2. *p.* 4.

HYPERICUM vulgare *Bauhin. Pin. p.* 279. *Gerard. Emac.* 540. *Parkinſon* 572. *Raii Synop.* 342. *Hudſon Fl. Angl.* 290. *Scopoli. Fl. Carniol. n.* 944.

Tota planta glandulis nigris adſperſa.

RADIX perennis, lignoſa, fuſca.

CAULES plerumque plures ex eadem radice, bipedales, erecti, ſublignoſi, *læves, teretes, alternè, ancipites, fig.* 1. ramoſi.

RAMI oppoſiti, ſuberecti, ancipites.

FOLIA oppoſita, ſeſſilia, ovato-oblonga, obtuſa, perforata ſive pellucido-punctata, heptanervia ex luteo-viridia, *fig.* 2.

PEDUNCULI ancipites, multiflori.

PANICULA denſa.

CALYX: PERIANTHIUM quinquepartitum, ſtriatum, laciniis *lanceolatis, acuminatis, nudis, fig.* 3.

COROLLA: PETALA quinque, flava, ad unum latus crenulata, glandulis nigris adſperſa, *fig.* 4.

STAMINA: FILAMETA plurima, in tria corpora vix coalita, *fig.* 5. ANTHERÆ flavæ, biloculares, loculis ſubrotundis, inter quos *glandula nigra* ponitur, *fig.* 6.

PISTILLUM: GERMEN ſubovatum, STYLI tres divaricantes: STIGMATA ſimplicia, *fig.* 7.

PERICARPIUM: CAPSULA ſubtrigona, *fig.* 8. trilocularis, *fig.* 9. pallide fuſca.

RECEPTACULUM ſeu Thalamus ſeminum foramine triquetro gaudet, quod in pericarpii immaturi ſectione tranſverſa clare diſtingui poteſt, ut obſervavit Cl. Scopoli.

SEMINA plurima, oblonga, fuſca, *fig.* 10. 11.

The whole plant is ſprinkled over with ſmall black glands.

ROOT perennial, woody, of a brown colour.

STALKS ſeveral for the moſt part ſpringing from the ſame root, about two feet high, upright, woody, *ſmooth, round, alternately two edged, fig.* 1. much branched.

BRANCHES oppoſite, nearly upright, two edged.

LEAVES oppoſite, ſeſſile, of an oblong oval ſhape, obtuſe, having the appearance of being all over perforated, of a yellowiſh green colour with ſeven nerves or ribs, *fig.* 2.

PEDUNCLES two edged, ſupporting many flowers.

PANICLE buſhy.

CALYX: A PERIANTHIUM divided into five ſegments, and ſtriated, the ſegments *narrow and pointed, without any glands on them, fig.* 3.

COROLLA: five PETALS of a yellow colour, notched irregularly on one ſide, and ſprinkled over with little black glands, *fig.* 4.

STAMINA: FILAMENTS numerous, uniting at bottom in three ſcarcely diſtinct bodies or faſciculi, *fig.* 5. ANTHERÆ yellow and bilocular, each of the cavities of a roundiſh figure, and between them is ſituated *a ſmall black gland, fig.* 6.

PISTILLUM: GERMEN ſomewhat oval, three STYLES which divaricate; the STIGMATA ſimple, *fig.* 7.

SEED-VESSEL: a CAPSULE ſomewhat triangular, *fig.* 8. of a pale brown colour, with three cavities, *fig.* 9.

RECEPTACLE: the Receptacle which is continued through the Capſule, and connects the cavities together, has a triangular hole in it, which is very obvious in a tranſverſe ſection of it before it is ripe,—as the celebrated *Scopoli* has juſtly obſerved.

SEEDS numerous, oblong, and brown, *fig.* 10. 11.

It very often happens, that ſome of the minute parts of the Flower, and Seed, afford a more obvious, certain, and conſtant mark of ſpecific difference, than any part of the plant beſides, and we have a remarkable inſtance of the truth of this obſervation in the plant before us. A little gland, of a black colour, placed on the ſummit of the Anthera, at one view diſtinguiſhes this ſpecies, without any further inveſtigation: did ſuch obvious diſtinctions prevail in all plants, a knowledge of them might with much eaſe be acquired; and fortunately we ſhall find, on examination, ſuch marks more frequently occur than is generally imagined; whenever they do, we ſhall not fail to remark them.

The apparent perforation of the leaves, from whence this ſpecies is named, is not peculiar to it alone.

Although in the preſent practice this officinal plant does not ſeem to be much regarded, yet its ſenſible qualities, and the repeated teſtimonies of its virtues, entitle it, as Dr. Cullen * obſerves, to further trials. To the taſte it is aſtringent and bitter, and its effects ſeem to be chiefly diuretic. From poſſeſſing properties which have generally been called balſamic, it has been uſed as a vulnerary in external wounds, and internal hemorrhages; for the former purpoſe, the tops of the plant with the flowers are infuſed in oil; and for the latter, an infuſion of the plant is made in the manner of Tea. It has likewiſe been given in ulcerations of the kidnies, and has even been ſuppoſed to poſſeſs virtues as a febrifuge.

It has had the ill fate to be abuſed by the ſuperſtition of the common people in France and Germany, who gather it with great ceremony on St. John's-Day, and hang it in their windows, as a certain charm and defence againſt Storms, Thunder, and Evil Spirits; miſtaking the meaning of ſome medical writers, who have fancifully given this plant the name of *Fuga Dæmonum*, becauſe they ſuppoſed, if given internally, it was a good medicine for maniacal and hypochondriacal diſorders.

The dried plant boiled with Alum dyes Wool of a yellow colour. It grows very common in hedges and fields that are but ſeldom tilled, and flowers in Auguſt and September.

* Vid. Dr. Cullen's Materia Medica, p. 206.

POLYGONUM BISTORTA. The GREATER BISTORT, or SNAKE-WEED.

POLYGONUM *Linnæi Gen. Pl.* OCTANDRIA TRIGYNIA.

Raii Synopſis, Genus 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO (VEL APETALO POTIUS).

POLYGONUM *Biſtorta* caule ſimpliciſſimo, monoſtachyo, foliis ovatis in petiolum decurrentibus. *Linnæi Syſt. Vegetab. p.* 311.

POLYGONUM radice lignoſa contorta, ſpica ovata, foliorum petiolis alatis. *Haller Hiſt. v.* 2. 258.

COLUBRINA ſeu Serpentaria fœmina. *Fuſchii icon.* 774.

SERPENTARIA mas ſive Biſtorta. *Fuſchii icon.* 773.

BISTORTA major radice minus intorta. *Bauhin. Pin.* 192.

BISTORTA major radice magis intorta. *Bauhin. Pin.* 192.

BISTORTA major. *Gerard. Emac.* 399. *major vulgaris Parkinſon* 391. *Raii Synopſis* 147. *Hudſon. Fl. Angl.* 146. *Flor. Dan. Ic.* 421.

RADIX perennis, craſſitie digiti, plus minuſve intorta, externe caſtanea, interne carnea, fibris et ſtolonibus plurimis inſtructa.

CAULIS pedalis aut bipedalis, *ſimplex*, ſuberectus, ſolidus, articulatus, (geniculi tumidi) teres, lævis.

STIPULÆ vaginantes, apice membranaceæ, *marceſcentes, ore obliquo.*

FOLIA *inferiora* cordato-lanceolata, undulata, ſubtus cæruleſcentia, glabra, in petiolos decurrentia, ſuperiora amplexicaulia in ſtipulas definentia.

FLORES ſpicati, ſpica oblongo-ovata, denſa.

BRACTEÆ membranaceæ, marceſcentes, biflores, bivalves, valvula inferiore tricuſpidata, cuſpide medio longiore quaſi ariſtata, flores pedicellati, pedicellis calyce longioribus.

CALYX, ſive COROLLA, ſubovata, quinquepartita, carnea, laciniis ovatis, obtuſis, concavis, *fig.* 1, 3.

STAMINA: FILAMENTA octo, ſubulata, alba, corollâ longiora; ANTHERÆ biloculares, purpuraſcentes, incumbentes, *fig.* 2.

PISTILLUM: GERMEN triquetrum, ſanguineum, STYLI tres longitudine ſtaminum; STIGMATA parva, rotunda, *fig.* 5, 6, 7.

NECTARIUM: glandulæ rubræ in fundo calycis, *fig.* 4.

SEMEN triquetrum, fuſcum, mucronatum, nitens, vernice quaſi obductum, *fig.* 8.

ROOT perennial, the thickneſs of one's finger, more or leſs crooked, externally of a cheſnut, internally of a fleſh colour, furniſhed with numerous fibres and creepers.

STALK from one to two feet high, *ſimple*, nearly upright, ſolid, jointed (the joints ſwelled), round, and ſmooth.

STIPULÆ encloſing the ſtalk as in a ſheath, at top membranous, *withered, the mouth oblique.*

LEAVES: *the bottom leaves* ſomewhat heart-ſhaped and pointed; waved at the edges, ſmooth, underneath blueiſh and continued down the footſtalks, the upper leaves embracing the ſtalk, and terminating in the ſtipulæ.

FLOWERS growing thickly in a ſpike, the ſpike of an oblong oval ſhape.

FLORAL LEAVES membranous, and withered, containing two flowers and having two valves, the lower valve three-pointed, the middle point running out into a kind of ariſta or beard, the flowers growing on footſtalks which are longer than the Calyx.

CALYX, or COROLLA, of an oval ſhape, and fleſh-coloured, divided into five ſegments, which are oval, obtuſe, and concave, *fig.* 1, 3.

STAMINA: eight FILAMENTS, tapering, white, and longer than the Calyx; the ANTHERÆ bilocular, purpliſh, and laying acroſs the filaments, *fig.* 2.

PISTILLUM: the GERMEN three-ſquare, of a deep red colour, three STYLES the length of the Stamina; the STIGMATA ſmall and round, *fig.* 5, 6, 7.

NECTARIUM: ſeveral ſmall red glands in the bottom of the Calyx, *fig.* 4.

SEED: triangular, brown, pointed, and ſhining as if varniſhed, *fig.* 8.

When a plant, not intended to be cultivated, in any reſpect prevents the growth of one which is the object of cultivation, ſuch a plant, however beautiful, may, with propriety, be called a weed; nor will the elegance or utility of the Biſtort ſecure it, in the eſtimation of the farmer, from that appellation.

This plant generally grows in moiſt meadows, and flowers in May and June; when it has once taken root, it propagates very faſt, and frequently will form large patches, to the excluſion of a conſiderable portion of the graſs; nor is it deſtroyed but with the greateſt difficulty. Happily our farmers about town are pretty much ſtrangers to this plant, as it is met with but rarely. It grows plentifully in a meadow by the ſide of *Biſhop's-Wood* near *Hampſtead;* and my obliging friend Dr. ALLEN informs me he has found it about *Batterſea.*

As an aſtringent medicine, the Biſtort appears to poſſeſs conſiderable virtue, and as ſuch may with propriety be made uſe of in all caſes where aſtringents are required; but more particularly in long-continued evacuations from the bowels, and other diſcharges both ſerous and ſanguineous. It is recommended alſo to faſten teeth which are looſe, and may be uſed either in powder, infuſion, or extract. If it could be procured in ſufficient quantity to make it anſwer, it might well be applied to the purpoſe of tanning leather.

In ſome parts of England the leaves are eat as a pot-herb.


Polygonum Bistorta?
Fuhrmann pinxit et sculpt



Lychnis Flos cuculi.

LYCHNIS FLOS CUCULI. MEADOW LYCHNIS.

LYCHNIS *Linnæi Gen. Pl.* DECANDRIA PENTAGYNIA.

Raii Synopſis Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

LYCHNIS *Flos Cuculi* petalis quadrifidis fructu ſubrotundo. *Lin. Syſt. Vegetab. p.* 361. *Sp. Pl.* 625.

LYCHNIS petalis quadrifidis. *Haller. hiſt. v.* 1. *n.* 921.

CARYOPYLLUS pratenſis, laciniato flore ſimplici, ſive Flos Cuculi. *Bauhin. pin.* 210.

LYCHNIS plumaria ſylveſtris ſimplex. *Parkinſ. Parad.* 253.

ARMERIUS pratenſis mas et fœmina. *Gerard. Emac.* 600.

Raii Synop. ed. 3. 338. *Hudſon. Fl. Angl.* 174. *Oeder. Flor. Dan. tab.* 590. *Scopoli. Fl. Carniol. ed.* 2. *p.* 311.

RADIX perennis, fibroſa, ex albido-fuſca, ſaporis ſubacris.

ROOT perennial, fibrous, of a browniſh white colour and ſomewhat biting taſte.

CAULIS pedalis ad tripedalem, erectus, ſulcato-angulatus, articulatus, geniculi tumidi, ſcabriuſculus, purpuraſcens.

STALK from one to three feet high, upright, ſomewhat angular and grooved, jointed, the joints ſwelled, roughiſh, and of a purpliſh colour.

FOLIA caulis, oppoſita, connata, lanceolata, carinata, ſuberecta, lævia.

LEAVES of the ſtalk oppoſite, connate, lanceolate, the midrib prominent underneath, upright and ſmooth.

PEDUNCULI oppoſiti, plerumque unico intermedio.

PEDUNCLES oppoſite, one generally intermediate.

CALYX: PERIANTHIUM monophyllum, tubulatum quinquedentatum, decangulatum, purpureum, perſiſtens, *fig.* 1.

CALYX a PERIANTHIUM of one leaf, tubular, quinquedentate, having ten angles, or ridges, and of a deep purple colour.

COROLLA PETALA quinque, unguis longitudine calycis, *fig.* 2. LIMBUS quadrifidus, laciniis exterioribus brevioribus, et anguſtioribus, *fig.* 4. ad baſin limbi laminæ duæ erectæ, acutæ, *fig.* 3.

COROLLA: five petals, the claw the length of the calyx, *fig.* 2. the LIMB divided into four laciniæ, the exterior ſhorteſt and narroweſt, *fig.* 4. at the bottom of the limb are placed two ſmall upright laminæ, *fig* 3.

STAMINA: FILAMENTA decem, ſubulata, quorum quinque breviora, *fig.* 5. brevioribus ungui petalorum affixis, *fig.* 6. ANTHERÆ oblongæ, biloculares, *fig.* 7. incumbentes, purpuraſcentes.

STAMINA: ten FILAMENTS, tapering, five long and five ſhort, *fig.* 5. the ſhorter filaments affixed to the claw of each petal, *fig.* 6. the ANTHERÆ oblong, bilocular, *fig.* 7. laying acroſs the filaments, and of a purpliſh hue.

PISTILLUM GERMEN ſubovatum, *fig.* 8. STYLI quinque, ſubulati, ſubincurvati, *fig.* 10. STIGMATA ſimplicia, *fig.* 10.

PISTILLUM: the GERMEN ſomewhat oval, *fig.* 8. five STYLES tapering and bending a little inward, *fig.* 10. STIGMATA ſimple, *fig.* 10.

PERICARPIUM CAPSULA ovata, unilocularis, *ore quinquedentato, dentibus reflexis, fig.* 9.

SEED-VESSEL: a CAPSULE, oval, of one cavity, the *mouth having five teeth which turn back, fig.* 9.

SEMINA numeroſa, ſubcompreſſa, ſcabriuſcula, ex cinereo-fuſca, *fig.* 11, 12.

SEEDS numerous, flattiſh, rough, and of a brown aſh colour, *fig.* 11, 12.

A variety of names hath been given to this plant, as Meadow Pink, Cuckow Flower, Wild Williams, Ragged Robin, &c. Meadow Lychnis, however, ſeems to us the moſt eligible. It abounds in moiſt meadows, where it flowers in May and June, and is included amongſt the great number of which our meadow hay is compounded: goats, ſheep, and horſes, are ſaid to feed on it. The uſe to which it is applied ſeems to be chiefly ornamental; the beauty of its flowers juſtly entitles it (with many other neglected Britiſh Plants) to a place in the gardens of the curious, where it is frequently found with a double flower, making a beautiful appearance, and requiring little more care in its culture, than to be placed in a moiſt ſituation: it may be propagated either by ſeeds or ſlips; the ſeeds may be found ripe in the latter end of June, by the ſides of ditches, where the mower's ſcythe has not reached them. We ſometimes find the Meadow Lychnis growing wild with a double flower, and ſometimes with a white one; but this is altogether accidental.

The agreement between the blowing of flowers, and the periodical return of birds of paſſage, has been attended to from the earlieſt ages. Before the return of the ſeaſons was exactly aſcertained by aſtronomy, theſe obſervations were of great conſequence in pointing out ſtated times for the purpoſes of agriculture; and ſtill, in many a cottage, the birds of paſſage and their correſponding flowers aſſiſt in regulating

"*The ſhort and ſimple annals of the poor.*"

For this reaſon, no doubt, we have ſeveral other plants that, in different places, go by the name of Cuckow Flower.

Gerard ſays, Cardamine pratenſis (Common Ladies Smock) is the true Cuckow Flower. *Shakſpere's* Cuckow Buds are of "yellow hue." By ſome the Orchis, Arum, and Wood-Sorrel, are all called after the Cuckow.

BELLIS PERENNIS. COMMON DAISY.

BELLIS *Linnæi Gen. Pl.* SYNGENESIA POLYGAMIA SUPERFLUA.
Raii Synopſis Gen. 8. HERBÆ FLORE COMPOSITO DISCOIDE, SEMINIBUS PAPPO DESTITUTIS, CORYMBIFERÆ DICTÆ.
BELLIS *perennis*, ſcapo nudo. *Linnæi Syſtem. Vegetab. p.* 640. *Fl. Suecic. p.* 296. *Haller. hiſt. p.* 39. *Scopoli. Fl. Carniol. v.* 2. 146.
BELLIS ſylveſtris minor. *Bauhin. pin.* 261. *Gerard. emac.* 635. *Parkinſon* 530. *Raii Syn. p.* 184. *Hudſon. Fl. Angl.* 320. *OEder. Fl. Dan. icon.* 503.

RADIX perennis, fibroſa.
FOLIA ovata, dentata, hirſutula, in petiolos longos decurrentia; diſrupta fila trahentia.

SCAPI teretes, hirſuti, triunciales, uniflori, ad apicem fiſtuloſi.
CALYX *communis* ſimplex, foliolis æqualibus, *fig.* 1. apice membranaceis, hirſutis, obtuſis, *fig.* 2. lente auct.
COROLLA *compoſita*, radiata: *Corollulæ* hermaphroditæ, tubuloſæ, numeroſæ in diſco. *Fœmininæ* ligulatæ, calycis foliis plures in radio. Floſculi *Hermaphroditi* infundibuliformes quinquefidi flavi, *fig.* 3, 4. lente auct.: *Fœminæi* ligulati, lanceolati, albi, *fig.* 10.

STAMINA *Hermaphroditis:* FILAMENTA quinque breviſſima, *fig.* 5. ANTHERÆ cylindracea, tubuloſa, *fig.* 6.
PISTILLUM *Hermaphroditis:* GERMEN ovatum, *fig.* 9. STYLUS filiformis, *fig.* 8. STIGMA craſſiuſculum, bifidum, *fig.* 7. *Fœminæi:* GERMEN ovatum, *fig.* 13. STYLUS filiformis. STIGMATA duo patula, linearia, *fig.* 11.

SEMINA ovata, compreſſa, marginata, pappo deſtituta, *fig.* 14.
RECEPTACULUM nudum, conicum, *fig.* 15.

ROOT perennial, and fibrous.
LEAVES oval, indented, ſlightly hirſute, running down the foot-ſtalks, which are long and if broke acroſs appear ſtringy.
STALKS round, hirſute, about three inches high, ſupporting one flower, at top hollow.
CALYX the *common* calyx ſimple, the leaves equal, *fig.* 1. at the top membranous, hairy and obtuſe, *fig.* 2. one of the tips magnified.
COROLLA *Compound* and radiated: the *Corollulæ* or floſculi in the diſk or middle numerous, tubular, and *hermaphrodite*, thoſe in the radius or circumference flat, more numerous than the leaves of the calyx, and *female*. The *Hermaphrodite* Floſculi funnel ſhaped, divided into five ſegments and yellow, *fig.* 3, 4. magnified. The *Female* floſculi tubular at bottom, flat towards the extremity, lanceolate, and white, *fig.* 10.
STAMINA in the *Hermaphrodite* flower: five FILAMENTS very ſhort, *fig.* 5. ANTHERÆ united into a tube, *fig.* 6.
PISTILLUM of the *Hermaphrodite* flower: GERMEN oval, *fig.* 9. STYLE thread-ſhaped, *fig.* 8. STIGMA thickiſh and bifid, *fig.* 7. of the *Female* flower: GERMEN oval, *fig.* 13. STYLE thread-ſhaped, two STIGMATA narrow and ſpreading, *fig.* 11.
SEEDS oval, flat, margin'd without any pappus or down, *fig.* 14.
RECEPTACLE naked and of a conical figure, *fig.* 15.

The Daiſy has been recommended by ſome writers to be given in hectic fevers, cauſed by drinking cold water when the blood has been heated by exerciſe, either infuſed in water or milk.

In ſome parts of Germany, it is ſaid to be boiled and eaten with meat as a pot-herb; but it does not ſeem to promiſe much either as phyſic or food for man. Sheep and horſes refuſe it; and it is very probable, that none of our cattle eat it willingly. If ſo, the owners of lands pay dear for their enamelled meads, and daiſied carpets; but this part of huſbandry ſeems as yet little underſtood or attended to. As rural œconomiſts we have ventured to ſay thus much in diſpraiſe of this flower, notwithſtanding the laviſh encomiums the father of our Engliſh poets has beſtowed on it:

——— In ſpecial one called Se of the daie
The Däiſie, a floure white and rede,
And in French called *La bel Margarete*,
O commendable floure, &c. ———
——— Above all flouris in the mede
Than love I moſt thoſe flouris white and rede,
Such that men callen Daiſies in our Town.

Chaucer is perhaps the firſt that takes notice of the Horologium Floræ, or opening and ſhutting of flowers at a particular time of the day.

——— She that is of all flouris the floure,
Fulfilled of all virtue and honoure;
And ever alike fair and freſh of hewe,
As well in winter as in ſummer newe,
As ſoon as ever the Sunne ginneth Weſt
To ſene this floure, how it will go to reſt,
For fear of night, ſo hateth ſhe darkneſſe;
Her chere is plainly ſpread in the brightneſſe
Of the Sunne. ———
Well by reaſon men it calle maie
The Däiſie, or elſe the Eye of the Daie.
And at the laſt there, tho began anon
A Lady for to ſing right womanly
A Bargonet in praiſing the Daiſie;
For as methought among her notis ſwete
She ſaid *Si douce eſt la Margarete.*

Retuned by Dryden in his own numbers:

And when the Band of Flutes began to play,
To which a Lady ſung a Virelay;
And ſtill at every cloſe ſhe would repeat
The burden of the Song, the *Daiſy is ſo ſweet.*
The Daiſy is ſo ſweet when ſhe begun,
The troops of Knights and Dames continued on
The Concert, and the voice ſo charm'd my Ear
And ſooth'd my Soul that it was Heaven to hear.

Etymologiſts agree with the Old Bard in his derivation of the Daiſy, *viz.* Days Eye. Under the French name Margarette it is probable a compliment was intended to ſome lady, but Critics are not agreed who this lady was.

Like many other flowers the Daiſy becomes double by culture, and frequently *proliferous:* in this ſtate it is called the *Hen and Chicken* Daiſy.



Bellis perennis.



Leontodon Taraxacum.

LEONTODON *TARAXACUM.* DANDELION.

LEONTODON *Linnæi Gen. Pl.* SYNGENESIA. POLYGAMIA ÆQUALIS.
Raii Synopſis ed. 3. Gen. 6. HERBÆ FLORE COMPOSITO, NATURÆ PLENO LACTESCENTES.
LEONTODON *Taraxacum* calycis ſquamis inferne reflexis, foliis runcinatis denticulatis lævibus. *Linnæi Syſt. Vegetab. p.* 596. *Sp. Plant.* 1122. *Fl. Suecic.* 270.
TARAXACUM calycibus glabris, ſquamis imis reflexis. *Haller. hiſt. v.* 1. *p.* 56.
HEDYPNOIS *Taraxacum. Scopoli Flor. Carn. n.* 957.
HEDYPNOIS major *Fuſchii.*
DENS LEONIS latiore folio. *Bauhin. pin. p.* 126. *Gerard. emac.* 290. *Parkinſon* 780. *Raii Synop. ed. 3. p.* 170. *Hudſon. Fl. Angl. p.* 297. *Oeder Fl. Dan. Icon.* 574.

RADIX perennis, ſubfuſiformis, lacteſcens, externe pallide fuſca,

FOLIA laciniato-pinnatifida, plus aut minus profunde inciſa, laciniis acutis et acute dentatis, plerumque lævia, nonnunquam vero ſubaſpera.

SCAPI nudi, fiſtuloſi, lacteſcentes, verſus apicem ſubtomentoſi, uniflori.

CALYX *communis* lævis, glaucus, *ſquamis inferioribus reflexis, fig.* 1.

COROLLA *compoſita*, flava, corollulis hermaphroditis, numeroſis, æqualibus. *Propria* monopetala, ligulata, truncata quinquedentata, *fig.* 2.

STAMINA: FILAMENTA quinque capillaria, breviſſima, *fig.* 3. ANTHERÆ flavæ, in tubum cylindraceum coalitæ, *fig.* 4.

PISTILLUM: GERMEN oblongum, *fig.* 5. STYLUS longitudine corollæ, *fig.* 6. STIGMATA duo revoluta, *fig.* 7.

SEMEN ſubincurvatum, ſubcompreſſum, ſubtetragonum, ſtriatum, *apice echinatum*, pallide olivaceum, *fig.* 8, 9. PAPPUS ſtipitatus, ſimplex, ſtipite brevior, *fig.* 10.

RECEPTACULUM nudum, alveolatum, *fig.* 11.

ROOT perennial, tapering, milky, externally of a pale brown colour.

LEAVES more or leſs deeply jagged, each jag or lacinia pointed, and ſharply indented, generally ſmooth, but ſometimes a little rough.

STALKS naked, hollow, milky, towards the top covered with a kind of down, ſupporting one flower on each.

CALYX: the *common* or general Calyx ſmooth, glaucous, *the lowermoſt leaves or ſquamæ turning back, fig.* 1.

COROLLA: the flower compounded of a great number of COROLLULÆ or leſſer flowers, which are yellow, hermaphrodite and equal; each *Corollula* monopetalous, tubular at bottom, and flat towards the extremity, the apex truncated and quinquedentate, *fig.* 2.

STAMINA: five FILAMENTS ſmall and very ſhort, *fig.* 3. The ANTHERÆ yellow, uniting and forming a cylindrical tube, *fig.* 4.

PISTILLUM: GERMEN oblong, *fig.* 5. STYLE the length of the COROLLA, *fig.* 6. STIGMATA two, rolling back, *fig.* 7.

SEED a little crooked, flattiſh, and ſomewhat four ſquare, ſtriated or grooved, *at top prickly*, of a pale olive colour, *fig.* 8, 9. the *Down or* Pappus ſtanding on a foot-ſtalk, ſimple, not feathery, ſhorter than the foot-ſtalk, *fig.* 10.

RECEPTACLE naked, and full of little holes, *fig.* 11.

As a medicinal plant the Dandelion is thought to poſſeſs conſiderable virtues, and has been frequently made uſe of in obſtructions of the Viſcera, particularly the Jaundice. Some recommend the juice, others a decoction of the whole plant. It appears to operate chiefly by urine, and, from poſſeſſing this property in a conſiderable degree, it has acquired its vulgar name of *Piſs-a-bed.* Its other, and more common name, ſeems to be a corruption of the French term *Dent de Lion.*

As a kind of ſallad, this plant is by many preferred to any other, particularly by the inhabitants of Spital-fields, many of whom being deſcended from French families, that forſook their native country for one more favourable to religious liberty, ſtill retain the peculiar cuſtoms of that people in their diet, &c. They blanch or whiten it as the gardeners do endive, and the inferior claſs generally uſe the ſimple proceſs of laying a tile on it; for whatever excludes the light from this, or any other plant, will make it become white, all plants deriving their colours from the fountain of light, the ſun. And it is remarkable, that many plants containing bitter and acrid juices are rendered by this proceſs mild, ſweet, and agreeable: who, for inſtance, could eat endive, celery, or even lettuce, in their wild uncultivated ſtates?

The Dandelion grows in the greateſt plenty in rich meadows, although it is very common on walls, and in courts and areas. When growing in a barren ſoil or dry ſituation, the leaves become more narrow and jagged.

It flowers in May, and is the firſt plant which covers our meadows with a beautiful yellow coat: a few weeks afterwards, when it produceth its ſeed, it changes this for a white one.

Children frequently amuſe themſelves with blowing off the ſeeds, which ſtand naked on the receptacle or top of the ſtalk; and the round white heads, formed by the expanſion of their pappus or down, they call *clocks.*

The young botaniſt generally finds ſome difficulty in acquiring a clear idea of the ſtructure of theſe compound flowers, occaſioned by the minuteneſs of the parts of fructification, which however are much larger and more conſpicuous in this than in many others of the claſs SYNGENESIA, and therefore a proper flower for him to begin with.

On examining the flower of the Dandelion he will find that it is not a double flower, properly ſo called, as he might be led to think from its fulneſs; but that it is compoſed of a great number of *Floſculi*, or leſſer flowers, placed cloſe together on one common receptacle or bottom, and encloſed by one common or general calyx. On diſſecting each of theſe *Floſculi*, he will find them to conſiſt of a COROLLA, or PETAL, *fig.* 2. which at bottom is tubular, but towards the extremity flat; that from the bottom or tubular part of the corolla, five FILAMENTS ſpring, which are ſmall and ſhort, yet looſe and unconnected, *fig.* 3.; that theſe filaments are furniſhed with ANTHERÆ, which unite together and form a long ſlender tube, *fig.* 4. Beneath the corolla is placed the GERMEN, or future ſeed, *fig.* 5.; from whence the STYLE, or middle part of the Piſtillum, proceeds, and paſſes up through the middle of the flower, betwixt the Filaments, and through the tube formed by the union of the Antheræ, *fig.* 6. and is furniſhed at top with two STIGMATA which roll back, *fig.* 7. At a little diſtance from the Germen, the lower part of the Stylus is ſurrounded by numerous upright hairs, which are the future PAPPUS, or Down, *fig.* 10.

This, then, he will find to be the appearance of the parts of fructification in a full blown flower.

Thoſe parts of the flower which were more immediately or more remotely neceſſary to the impregnation of the Seed having now performed their office decay, the Corolla with the Stamina and upper part of the Piſtillum drops off, the Seed becomes larger, the lower part of the Piſtillum remains, is elongated, and becomes the foot-ſtalk of the Pappus, and the Seed as yet immature, with the Pappus as yet moiſt, are all encloſed and preſſed by the Calyx into a conical form. This is its appearance in its ſecond ſtate.

The fructification ſtill going forward, the ſeed becomes ripe and brown. The Pappus, now deprived of its moiſture, expands itſelf every way, *fig.* 10. puſhes back the Calyx, and aſſumes a ſpherical form. The ſeeds fitted for vegetation, and thus expoſed, are carried away by the firſt ſtrong wind, and "a new race planted far from their native ſoil."

Such then is the curious proceſs which nature makes uſe of in the perfecting and diſſemination of this plant.

OPHRYS APIFERA. BEE ORCHIS.

OPHRYS *Linnæi Gen. Pl. ed.* 3. GYNANDRIA DIANDRIA.

ORCHIS. *Raii Synopſis, ed.* 3. 379. HERBÆ BULBOSIS AFFINES.

OPHRYS *apifera* bulbis ſubrotundis, ſcapo folioſo, nectarii labio quinquelobo; lobis ſubtus inflexis, *Hudſon. Fl. Angl. p.* 340.

ORCHIS, radicibus ſubrotundis, labello holoſericeo, emarginato, appendiculato. *Haller. hiſt. vol.* 2. 1266. *tab.* 24. Duas ſpecies *apiferam* et *muſciferam* HUDSONIS et HALLERI ſub uno nomine *Inſectiferæ* conjungit CL. LINNÆUS. *Fuſchii icon.* 560 *Bauhin. pin.* 83. *Gerard. emac.* 212.

RADIX, Bulbi duo, ſubrotundi, inæquales, radiculis longis vix fibroſis ſupra inſtructi.

ROOT, two roundiſh unequal bulbs, furniſhed at top with a few ſmall longiſh fibres, but little branched.

CAULIS ſemipedalis aut pedalis, teres, *fig.* 1. folioſus.

STALK from half a foot to a foot high, round, *fig.* 1. leafy.

FOLIA vaginantia, ovato-lanceolata, ſubtus ſubargentea, fibris lineata, ſæpe mutilata et fuſca.

LEAVES embracing the ſtalk, of an oval pointed ſhape, underneath ſilvery, with linear fibres, frequently imperfect, and of a brown colour.

BRACTEÆ *magnæ, vaginantes*, virides, longitudine floris.

FLORAL LEAVES *large, in the form of a ſheath*, green, and of equal length with the flowers.

FLORES a tribus ad ſex, ſpicati.

FLOWERS from three to ſix, growing in a ſpike.

COROLLA: PETALA quinque, tria exteriora reliquis msjora, ovata, concava, reflexa, purpuraſcentia, ſerioribus pallidioribus, ſubcarinata, carinâ viridi, *fig.* 2.; duo interiora exterioribus quadruplo minora, anguſta, *hirſuta, poſtice canaliculata, ad baſin latiora*, antrorſum extantia.

COROLLA: five PETALS, the three exterior larger than the reſt, oval, concave, turning back, purpliſh, ſomewhat keel-ſhaped, the keel green, *fig.* 2.: the latter flowering paleſt: the two interior four times ſmaller than the other, narrow, *hairy, hollow behind, broadeſt at bottom*, and projecting forward.

NECTARII Labellum amplum, leniter convexum, ſuborbiculatum, fuſco-ſericeum, maculis flavis frequenter variegatum, quinquelobum, *lobis inflexis, fig.* 3.; *lateralibus ſubtriangularibus, hirſutis, fig.* 4.; medio anteriorum productiore, apice recurvato flavo, *fig.* 5.; machina ſtaminum ſive STYLUS longa, ſuberecta, *apice incurvata et ſurſum recurvata, fig.* 11. antice biloculari, loculis apertis, *fig.* 12. anguſtis, marginibus albis membranaceis, *fig.* 13.

NECTARY. The Lip of the Nectary large, ſomewhat convex, roundiſh, of a ſilky brown colour, frequently variegated with yellow ſpots; having five lobes, *the lobes bending underneath, fig.* 3.; *the two ſide lobes ſomewhat triangular and hairy, fig.* 4.; the middle of the anterior running out to a point, which turns back, and is of a yellow colour, *fig.* 5.; the STYLE, which in this plant ſupports the Stamina, long, upright, *at the tip bending downwards, and again upwards, fig.* 11. anteriorly, having two cavities which are open and narrow, *fig.* 11. the edges white and membranous, *fig.* 13.

STAMINA: FILAMENTA duo, *fig.* 6. e ſquamulâ nectarifera ad baſin Styli exeuntia, nutantia, Stigmati frequenter adhærentia, *fig.* 8. baſi glandula ſive globulo albo pellucido inſtructa, *fig.* 7.; ANTHERÆ ſubrotundæ, flavæ, *fig.* 9.

STAMINA: two FILAMENTS, *fig.* 6. ariſing from the bottom of the Style out of a nectariferious ſcale, hanging down, frequently adhering to the Stigma, *fig.* 8. furniſhed at bottom with a ſmall tranſparent gland or globule, *fig.* 7.; the ANTHERÆ roundiſh and yellow, *fig.* 6.

PISTILLUM: GERMEN oblongum, hexangulare, angulis obtuſis *rectis*; STIGMA, *fig.* 10. melleo liquore obductum, cui particulæ Antherarum frequenter adhærent.

PISTILLUM: the GERMEN oblong, having ſix angles, the angles obtuſe, *not twiſted*; the STIGMA, *fig.* 10. covered with a viſcid ſubſtance like honey, to which ſome ſmall particles of the Antheræ frequently adhere.

PERICARPIUM: CAPSULA oblonga, fuſca, uncialis, *fig.* 14. unilocularis, *fig.* 16. trivalvis, valvis carinatis, *fig.* 15.

SEED-VESSEL: a CAPSULE about an inch in length, oblong, brown, *fig.* 14. of one cavity, *fig.* 16. and three valves, the valves keel-ſhaped, *fig.* 15.

SEMINA plurima, minuta, oblonga, utraque extremitate membranacea, pellucida, reticulata, *fig.* 18. lente aucta, interiori parti carinæ longitudinaliter affixa, *fig.* 17.

SEEDS numerous, ſmall, oblong; at each end membranous, tranſparent, and reticulated, *fig.* 18. magnified, affixed lengthwiſe to the inſide of the keel of each valve, *fig.* 17.

Flowers in the Months of June and July. The Seed is ripe the latter end of Auguſt.

Grows generally on chalky ground near woods, and ſometimes in meadows. Is become ſo rare about *London*, as ſcarcely to be found with any certainty. Mr. ALCHORNE informs me, he has frequently gathered it in the pits behind *Charlton-Church*, and in the woods near *Chiſſelhurſt* in *Kent*; but it is often met with in plenty at a greater diſtance from town.

The root appears to poſſeſs the ſame virtues with thoſe of the Orchis from which Salop is made; but being much ſmaller, is not worth cultivating on that account. The great reſemblance which the flower bears to a Bee, makes it much ſought after by Floriſts, whoſe curioſity indeed often prompts them to exceed the bounds of moderation, rooting up all they find, without leaving a ſingle ſpecimen to chear the heart of the Student in his botanic excurſions. The beſt time of tranſplanting them is when they are in flower. This, with moſt of the other Orchis's, was cultivated with the greateſt ſucceſs by the late PETER COLLINSON, Eſq. (whoſe memory will always be revered by every Botaniſt) in his garden at *Mill-hill*.—His method was to place them in a ſoil and ſituation as natural to them as poſſible, and to ſuffer the graſs and herbage to grow round them.

I have not yet heard of their being propagated by ſeed. It is to be wiſhed that ſome intelligent Gardener would exert himſelf in making ſome experiments to raiſe them in this way.

Botaniſts have often been at a loſs, in claſſing many plants, to find ſome reſemblance by which they might diſtinguiſh their particular ſpecies; but in this plant the caſe is otherwiſe: the flower is ſo like the inſect that gives it its name, that it ſtrikes every beholder with admiration. What uſeful purpoſe is intended by it, we do not at preſent know: ſome future Obſerver may perhaps diſcover, for they who will examine Nature herſelf "have much to ſee."


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Ophrys Apifera
Kilburn pinxt et Sculpt



Cerastium aquaticum.

Tilburn fecit

CERASTIUM AQUATICUM. MARSH CERASTIUM, or MOUSE-EAR CHICKWEED.

CERASTIUM *Linnæi Gen. Pl.* DECANDRIA PENTAGYNIA.

Raii Synop. Gen. 24 HERBÆ PENTAPETALÆ VASCULIFERÆ.

CERASTIUM *aquaticum* foliis cordatis, ſeſſilibus, floribus ſolitariis, fructibus pendulis, *Linnæi Syſt. Vegetab. p.* 363. *Fl. Suecic. p.* 157.

ALSINE foliis ovato-cordatis, imis petiolatis, tubis quinis. *Haller. hiſt. n.* 885.

STELLARIA aquatica. *Scopoli Fl. Carniol. p.* 320.

ALSINE aquatica major. *Bauhin. pin.* 254.

ALSINE major. *Gerard. emac.* 611. maxima, *Parkinſon* 759. *Raii Syn. p.* 347. *Hudſon. Fl. Angl. p.* 177.

RADIX perennis, fibroſa, repens.

CAULES bipedales, debiles, pene teretes, teneri, filoſi, hirſuti, ramoſi, rami alterni.

FOLIA Caulis ſeſſilia, amplexicaulia, cordato-acuminata, margine in ſuperioribus preſertim undulata, lævia, ſubviſcida; ramorum magis undulata, petiolata.

PEDUNCULI alterni, e dichotomia caulis, uniflori, *poſt floreſcentiam penduli.*

CALYX: PERIANTHIUM pentaphyllum, perſiſtens, foliolis lanceolatis, concavis, ſubcarinatis, apice obtuſiuſculus, hirſutis, margine membranaceis, petalis paulo brevioribus, *fig.* 1.

COROLLA: PETALE quinque alba, patentia, bipartita, laciniis oblongis, nervoſis, divaricantes, *fig.* 2. 3.

STAMINA: FILAMENTA decem, ſubulata, alba, receptaculo inſerta, ad baſin et inter petala alterne locata, *fig.* 4. quæ inter petala locantur paulo longiora ſunt et glandula ad baſin inſtruuntur, *fig.* 5. ANTHERÆ inſidentes, biloculares, albæ, *fig.* 4.

PISTILLUM: GERMEN ſubrotundum, apice ſulcatum, STYLI quinque albi, filiformes, longitudine Germinis. STIGMATA ſimplicia, *fig.* 6.

PERICARPIUM: CAPSULA ovata, obſolete pentagona, ore quinquedentato, *fig.* 7.

SEMINA rufa, ſubreniformia, ſcabra, 60 numeravi, *fig.* 8. 9.

ROOT perennial, fibrous, and creeping.

STALKS about two feet in length, weak, almoſt round, tender, ſtringy, hirſute, and branched, the branches alternate.

LEAVES of the Stalk ſeſſile, embracing the Stalk, ſomewhat heart-ſhaped and acuminate, the edge particularly in the upper ones waved, ſmooth, and ſomewhat viſcid: thoſe of the branches more waved with ſhort foot-ſtalks.

FOOT-STALKS alternate, from the forking of the Stalk, uniflorous, *after the bloſſom is gone off pendulous.*

CALYX: a PERIANTHIUM of five leaves, perſiſting, the leaves lanceolate, concave, ſlightly keel-ſhaped, bluntiſh at top, hirſute, at the edge membranous, and a little ſhorter than the Petals, *fig.* 1.

COROLLA: five PETALS white, ſpreading, divided almoſt to the bottom, the laciniæ or ſegments oblong, nervous, and divaricating, *fig.* 2. 3.

STAMINA: ten FILAMENTS, tapering, white, fixed to the receptacle, placed alternately, one at the baſe and one betwixt each petal, *fig.* 4.; thoſe placed between the petals are a little longer than the others, and furniſhed at bottom with a gland, *fig.* 5. ANTHERÆ white and bilocular, *fig.* 4.

PISTILLUM: GERMEN roundiſh, at top grooved, five STYLES thread-ſhaped, white, the length of the Germen. STIGMATA ſimple, *fig.* 6.

SEED-VESSEL: an ovate CAPSULE, ſlightly pentangular, the mouth quinquedentate.

SEEDS reddiſh brown, rough, about 60 in each capſule, *fig.* 8. 9.

SOME of our modern and moſt celebrated ſyſtematic Botaniſts ſeem very much divided with reſpect to the Genus to which this Plant ſhould belong. HALLER makes it an *Alſine* or *Chickweed*, SCOPOLI a *Stellaria*, and LINNÆUS a *Ceraſtium*. We ſhall not pretend to decide who is moſt in the right; but only obſerve, that its general habit or appearance, and the form of its ſeeds, might eaſily induce HALLER to conſider it as an *Alſine*. The ſhape of its petals, with the ſtructure of its ſeeds, would juſtify SCOPOLI in calling it a *Stellaria*; while the number of its ſtyles might lead LINNÆUS with propriety to place it among the *Ceraſtiums*. To us it appears to have the greateſt natural affinity with the *Alſine media* or common *Chickweed*. It is true, LINNÆUS ranks that plant among thoſe which have *five* Stamina, yet it is frequently obſerved to have more; and the ſtructure of the flower evidently ſhows it to be formed for having *ten*, and thoſe flowers which have not that number may be conſidered as imperfect. The Seeds of theſe two plants are ſo ſimilar as ſcarcely to be diſtinguiſhed from each other, and their ſtalks are procumbent, tender, brittle, and ſtringy; indeed they frequently ſo much reſemble one another, as to oblige the young Botaniſt to have recourſe to the very different ſize of their flowers, in order to diſcriminate them.

This Plant grows in moiſt places, on the banks of rivers, and by ſtreams of water. It flowers in July and Auguſt. SCOPOLI aſſerts that the plants of this kind afford excellent food for Kine.

BROMUS MOLLIS. SOFT BROME GRASS.

BROMUS *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

BROMUS *mollis* panicula erectiuſcula, ſpiculis ovatis pubeſcentibus, ariſtis rectis, foliis molliſſime villoſis, *Linnæi Syſtem. Vegetab. p.* 102. *Sp. Pl. p.* 112.

BROMUS hirſutus, locuſtis ſeptifloris, ovato conicis. *Haller. hiſt. p.* 1504.

BROMUS Polymorphus. *Scopoli. Fl. Carniol. p.* 80.

FESTUCA avenacea hirſuta, paniculis minus ſparſis. *Raii Synop. p.* 413. *Hudſon. Fl. Angl. p.* 32. *n.* 1. Secalinus. *Schreber. Gram. pl.* 6. *fig.* 1.

RADIX biennis *.

CULMUS pedalis ad tripedalem, erectus; GENICULI tumidi, cylindracei.

FOLIA cum VAGINIS pilis mollibus veſtita.

PANICULA erectiuſcula, nunc coarctata, nunc diffuſa.

SPICULÆ *ovato-acutæ*, turgidæ, ſubcompreſſæ, plerumque villoſæ, octofloræ, circa oras glumarum albidæ, *fig.* 1.

CALYX: GLUMA bivalvis, valvulis inæqualibus, muticis, *fig.* 2.

COROLLA: GLUMA bivalvis, valvulâ exteriore lata, concava, ſtriata, ariſtata, *fig.* 4. interiore planiuſcula, *ciliata*, lanceolata, *fig.* 3. ARISTA valvulis paulo longior, ſubrecta, *fig.* 4.

NECTARIUM: Glumula bipartita, ad baſin petali interioris, *fig.* 5. parum auct.

STAMINA: FILAMENTA tria capillaria, ANTHERÆ primum flavæ, oblongæ, dein fuſcæ et bifurcatæ, *fig.* 7. 6. auct.

PISTILLUM: GERMEN ovatum, apice ſubemarginatum, *fig.* 8. STYLI duo, ad baſin uſque plumoſi, *ex uno latere germinis enati*, *fig.* 9.

SEMEN oblongum, concavum, calyci adnatum, *fig.* 10. denudatum, *fig.* 11.

ROOT biennial *.

STALK from one to three feet high, upright; the JOINTS ſwelled and cylindrical.

LEAVES together with their SHEATHS covered with ſoft hairs.

PANICLE nearly upright, ſometimes cloſe, ſometimes ſpreading.

SPICULÆ *oval and pointed*, turgid, flattiſh, generally villous, containing eight flowers, whitiſh about the edges of the Glumes, *fig.* 1.

CALYX: a GLUME of two valves, the valves unequal, without any beard or ariſta, *fig.* 2.

COROLLA: a GLUME of two valves, the outermoſt valve broad, hollow, ſtriated, and bearded, *fig.* 4.; the innermoſt flattiſh, *ciliated or hairy at the edges* and pointed, *fig.* 3.; the ARISTA a little longer than the valves and nearly ſtraight, *fig.* 4.

NECTARIUM: a ſmall kind of Glume deeply divided, placed at the baſe of the inner petal, *fig.* 5. a little magnified.

STAMINA: three FILAMENTS very ſmall, ANTHERÆ firſt yellow and oblong, laſtly brown and forked at each end, *fig.* 7. 6. magnified.

PISTILLUM: GERMEN oval, with a ſlight depreſſion at top, *fig.* 8. two STYLES feathery quite down to the bottom, *proceeding from one ſide of the Germen*, *fig.* 9.

SEEDS oblong, concave, adhering to the Calyx, *fig.* 10. the Calyx taken off, *fig.* 11.

OUR Farmers in general are not very warm in their recommendations of this Graſs, nevertheleſs it abounds in moſt of our beſt meadows. It ſprings up early, and ripens its ſeeds generally about the time of Hay-making. The ſeed is large, and each panicle contains nearly as much as that of a common Oat; indeed it ſeems to have more pretenſions to the name of Corn than of Graſs.

Although Cattle may not be ſo fond of the leaves and panicle of this Graſs while green as of ſome others, yet may it not (when cut down as it uſually is, when the ſeed is nearly ripe) contribute to render the hay more nutritive? and hence may it not be a proper Graſs to ſow with others? It ſeems at leaſt to deſerve the attention of the Farmer.

There is perhaps no claſs of plants more affected by difference of ſoil and ſituation than the Graſſes; hence the ſame plant has often been divided into ſeveral ſpecies; and to ſuch Varieties is the preſent Plant incident, as to occaſion SCOPOLI to give it the name of *Polymorphus*.

When it grows on a Wall, or dry Bank, the Spiculæ are generally more upright, and cloſer together: when the ſoil is rich and moiſt, the Spiculæ ſpread out, and the whole plant becomes much larger: in Meadows the Spiculæ frequently loſe their villous appearance and become perfectly ſmooth. To determine this ſpecies then with more certainty, recourſe muſt be had to the parts of fructification.

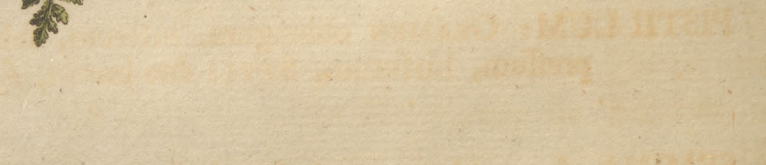
* According to Linnæus.

Bromus Mollis



Kilburn

Scandix Anthriscus



Kilburn pinxit et sculpsit

SCANDIX ANTHRISCUS. SCANDIX WITH ROUGH SEEDS.

SCANDIX *Linnæi Gen. Pl.* PENTANDRIA DIGYNIA.

Raii Syn. Gen. 11. UMBELLIFERÆ HERBÆ.

SCANDIX *Anthriſcus* ſeminibus ovatis hiſpidis, corollis uniformibus, caule lævi. *Linnæi Syſt. Vegetab. p.* 237. *Flor. Suecic.* 93.

CAUCALIS vaginis lanuginoſis, foliis triplicato-pinnatis, ſeminibus roſtratis. *Haller. hiſt. n.* 743.

MYRRHIS ſylveſtris, ſeminibus. *Bauhin. pin.* 160. *Parkinſon* 935. *Ger. emac.* 1038. *Raii Syn. p.* 220. Small Hemlock-Chervil with rough Seeds. *Hudſon. Fl. Angl. p.* 108. *Jacquin Flor. Auſtriac. Vol.* 2. *p.* 35. *tab.* 154.

RADIX annua, parva, albida, ſubinſipida.

CAULIS pedalis ad tripedalem, ſæpe altior, ſuberectus, teres, fiſtuloſus, lævis, ad genicula tumidus et ſubſtriatus, plerumque viridis.

FOLIA. Vaginæ ad baſin foliorum magnæ, marginibus lanuginoſis; folia mollia, tenera, multiplicate pinnata, hirſutula, ex luteo-virentia.

INFLORESCENTIA *Umbella.* UMBELLÆ obliquæ, pedunculatæ: Pedunculus univerſalis RADIIS brevior, RADII *univerſales* 3—5. glabri, *partiales* 2—6.

CALYX: *Involucrum univerſale* nullum. *Partiale* plerumque pentaphyllum, foliolis lanceolato-acuminatis, ciliatis, perſiſtentibus, *fig.* 1.

COROLLA: PETALA quinque, minima, ſubæqualia, alba, ſubcordata, apicibus inflexis, *fig.* 2.

STAMINA: FILAMENTA quinque, petalis paulo breviora; ANTHERÆ primum virides, dein fuſcæ, *fig.* 3.

PISTILLUM: GERMEN oblongum, inferum, ſubcompreſſum, hirſutum, STYLI duo breves, *fig.* 5.

SEMINA duo, oblonga, e fuſco-nigricantia, hinc ſulcato plana, inde convexa, roſtrata, pilis rigidis hamatis undique aſpera, *fig.* 6.

ROOT annual, ſmall, whitiſh, with little taſte.

STALK from one to three feet high, frequently taller, nearly upright, round, hollow, ſmooth, ſwelled and ſlightly ſtriated at the joints, and moſt commonly green.

LEAVES. The ſheaths formed by the baſe of the leaves are large and downy at the edges: the leaves ſoft, tender, many times pinnated, ſlightly hairy, and of a yellowiſh green colour.

INFLORESCENCE an *Umbell*, the UMBELLS oblique, ſtanding on foot-ſtalks, the general or univerſal foot-ſtalk ſhorter than the RADII; the *univerſal* RADII from 3 to 5, the *partial* RADII from 2 to 6.

CALYX. *The univerſal Involucrum* wanting, the *Partial* one generally compoſed of five leaves, which are pointed, hairy at the edges, and continue. *fig.* 1.

COROLLA: five PETALS very minute, nearly equal, white, ſomewhat heart-ſhaped, the tips bending in, *fig.* 2.

STAMINA: five FILAMENTS, a little ſhorter than the Petals; the ANTHERÆ firſt green, afterwards brown, *fig.* 3.

PISTILLUM: the GERMEN oblong, placed beneath the Corolla, flattiſh, and rough, two STYLES very ſhort, *fig.* 5.

SEEDS two, oblong, of a dark brown colour, on one ſide flat and grooved, on the other convex, running out to a point, and prickly with ſtiff hooked hairs, *fig.* 6.

THE great ſimilarity in the external appearance of a great number of umbelliferous plants, frequently hath been the cauſe of miſtakes, which have ſometimes proved hurtful to the health of individuals. At the ſame time that there is no claſs of plants which, at firſt ſight, appears to the young Botaniſt more difficult of inveſtigation than this, there is none perhaps which affords more conſtant, or more certain, marks of generic and ſpecific difference. Obvious diſtinctions may be drawn from the *Stalk* and *Leaves*: in ſome the ſtalk is ſmooth, in others rough, and in others more or leſs deeply channeled; in ſome the leaves are very finely divided, and in others but coarſely ſo; but the parts of *Fructification* afford the moſt pleaſing and ſcientific diſtinguiſhing marks. The abſence or preſence of the general and partial *Involucrum*, the number, ſhape, and ſituation of its leaves, the number of the *Radii* which compoſe the umbell, the ſize and equality of the *Petals*, and the very different appearances of the *Seeds*, all unite to render a knowledge of theſe plants eaſily acquired.

Some of the *Umbelliferi* are uſed in food, and others in medicine; the greateſt care will therefore be neceſſary in the drawing and deſcription of theſe; and in this no one ſeems to have ſucceeded ſo well as the celebrated JACQUIN. In the firſt and ſecond volumes of his *Flora Auſtriaca*, lately publiſhed, and which indeed are a moſt valuable addition to the ſtock of botanic knowledge, a great number of theſe plants are figured and deſcribed.

This plant grows very common on dry banks and in hedges: flowers from the beginning to the end of May, and the ſeeds are ripe in June. When it becomes luxuriant, as it ſometimes will from growing in a moiſt ſituation, it puts on ſomewhat the appearance of the common Hemlock, but may eaſily be diſtinguiſhed from that poiſonous plant, if attention be paid to the following particulars: the leaves of the Hemlock are perfectly ſmooth; theſe have a ſlight hairineſs, are more finely divided, and of a paler green. The ſtalk of the Hemlock is ſpotted; this is not. The Hemlock has a general involucrum, which in this plant is wanting. The ſeeds of the Hemlock are ſmooth, and theſe are rough. The Hemlock has a ſtrong diſagreeable ſmell; this not diſagreeable, but more like Chervil, to which in its virtues it ſhould ſeem neareſt allied.

SEDUM ACRE. COMMON YELLOW STONECROP, or WALL-PEPPER.

SEDUM *Linnæi Gen. Pl.* DECANDRIA PENTAGYNIA.

Raii Syn. Gen. 17. HERBÆ MULTISILIQUÆ SEU CORNICULATÆ.

SEDUM *acre* foliis ſubovatis, adnato-ſeſſilibus, gibbis, erectiuſculis, alternis; cyma trifida. *Linnæi Syſt. Vegetab. p.* 359. *Fl. Suecic. p.* 153.

SEDUM foliis conicis confertis, caulibus ramoſis, ſummis trifidis. *Haller. hiſt. v.* 1. *n.* 966.

SEMPERVIVUM minus vermiculatum acre. *Bauhin. pin.* 283.

VERMICULARIS ſeu Illecebra minor acris. *Ger. emac.* 517.

ILLECEBRA minor ſeu Sedum tertium Dioſcoridis. *Parkinſon* 735. *Raii Synop.* 270. *Hudſon. Fl. Angl. p.* 171.

RADIX perennis, fibroſa.

ROOT perennial, and fibrous.

CAULES numeroſi, cæſpitoſi, ramoſiſſimi, palmares, ad baſin repentes, dein erecti, teretes, folioſiſſimi.

STALKS numerous, growing in tufts, very much branched, three inches high, creeping at their baſe, but afterwards growing upright, round, and very leafy.

FOLIA alterna, conferta, imbricata, ſuberecta, adnato-ſeſſilia, ovata, obtuſa, brevia, carnoſo, margine paulùlùm compreſſa, glabra, *ſapore acri*, *fig.* 1.

LEAVES alternate, growing very thick together, and laying one over another, nearly upright, growing to the ſtalk, oval, blunt, ſhort, fleſhy, flattened a little at the edges, ſmooth, and of a *very biting taſte*, *fig.* 1.

FLORES ſeſſiles, lutei, in Cymas ſubtrifidas diſpoſiti.

FLOWERS ſeſſile, yellow, growing in Cymæ ſomewhat trifid.

CALYX: PERIANTHIUM quinquepartitum, perſiſtens, laciniis craſſis obtuſiuſculis, *fig.* 2.

CALYX: a PERIANTHIUM divided into five ſegments, and continuing, the ſegments thick and bluntiſh, *fig.* 2.

COROLLA: PETALA quinque lanceolato-acuminata, plana, patentia, Calyce duplo longiora, *fig.* 3.

COROLLA: compoſed of five long-pointed PETALS which are flat, ſpreading, and twice the length of the Calyx, *fig.* 3.

NECTARIUM: Squamula minima, alba, ad baſin, ſinguli Germinis extrorſum poſita, *fig.* 7.

NECTARY: a very minute ſcale or gland placed externally at the bottom of each Germen, *fig.* 7.

STAMINA: FILAMENTA decem ſubulata, longitudine Corollæ. ANTHERÆ flavæ, *fig.* 4.

STAMINA: ten FILAMENTS, tapering, the length of the Corolla. The ANTHERÆ yellow, *fig.* 4.

PISTILLUM: GERMINA quinque oblonga, flava, in STYLOS acuminatos deſinentia. STIGMATA ſimplicia, *fig.* 6.

PISTILLUM: five GERMINA, oblong, yellow, terminating in five long-pointed STYLES. The STIGMATA ſimple, *fig.* 6.

PERICARPIUM: CAPSULÆ quinque patentes, acuminatæ, compreſſæ, longitudinaliter futurâ introrſum dehiſcentes, *fig.* 8.

SEED-VESSEL: five CAPSULES, ſpreading, long-pointed, flat, opening internally by a longitudinal future, *fig.* 8.

SEMINA minima, ovata, rufa, *fig.* 9.

SEEDS very minute, oval, and reddiſh brown, *fig.* 9.

According to the account which ſome medical Writers give of this Plant, it appears to poſſeſs conſiderable virtues; while others, from the durability of its acrimony, and the violence of its operation, have thought it ſcarce ſafe to be adminiſtered. Chewed in the mouth it hath a very hot and biting taſte, whence its name of *Wall-Pepper*. Applied to the ſkin it excoriates and exulcerates it; taken internally it proves emetic and diuretic.

The Diſeaſes in which it has been chiefly recommended are the Scurvy and Dropſy, in both of which, according to Linnæus, it is an excellent remedy; and ſome inſtances are brought of the efficacy of its juice in Cancers, but theſe, perhaps, ſtand in need of farther confirmation.

It grows very common on Houſes, Walls, and gravelly Banks, and flowers in June. It continues but a ſhort time in bloſſom; but while it laſts, its lively yellow colour gives a very pretty appearance to thoſe Houſes and Walls which are covered with it.



Sedum acre.

Ranunculus acris.

1 2 3 4 5 6 7

RANUNCULUS ACRIS. UPRIGHT MEADOW CROWFOOT.

RANUNCULUS *Linnæi Gen. Pl.* POLYANDRIA POLYGYNIA.

Raii Gen. 15. HERBÆ SEMINE NUDO, POLYSPERMÆ.

RANUNCULUS *acris* calycibus patulis, pedunculis teretibus, foliis tripartito-multifidis, ſummis linearibus. *Linnæi Syſt. Vegetab. p.* 430. *Fl. Suecic. p.* 196.

RANUNCULUS foliis hirſutis, ſemitrilobatis, lobis lateralibus bipartitis, foliis caulinis ſemitrilobis. *Haller. hiſt. n.* 1169.

RANUNCULUS pratenſis erectus acris. *Bauhin. pin.* 178. *Gerard. emac.* 951. *Parkinſon* 329. *Raii Synopſis, p.* 248 *Hudſon. Fl. Angl. p.* 211. *Scopoli. Fl. Carniol. p.* 398.

RADIX perennis, e pluribus radiculis albidis conſtans.

CAULIS bipedalis, erectus, fiſtuloſus, teres, ſubpiloſus, apice ramoſus.

FOLIA *Radicalia* petiolis longis erectis inſidentia, tripartita, lobo medio trifido, lateralibus bilobis, omnibus acute dentatis aut inciſis, ſubhirſutis, ſupernè ad baſin præſertim ſæpe purpureis, venis ſubtus extantibus.

Caulina radicalibus ſimilia, in lacinias tenuiores vēro diviſa et petiolis brevioribus inſidentia, tandem linearia, ſeſſilia.
PETIOLI cum vaginis hirſuti.

PEDUNCULI teretes.

CALYX: PERIANTHIUM pentaphyllum, patens, flaveſcens, piloſum, foliolis ovatis, concavis, obtuſis, margine membranaceis, *fig.* 1.

COROLLA: PETALA quinque flava, nitentia, ſubcordata nunc emarginata, nunc integra, *fig.* 2.

STAMINA: FILAMENTA plurima, apice palulum dilatata, *fig.* 5, 4. ANTHERÆ flavæ, ſubincurvatæ, obtuſæ, *fig.* 4.

NECTARIUM: ſquamula emarginata, ad baſin petalorum, *fig.* 3.

PISTILLUM: GERMINA numeroſa, in capitulum collecta; STYLI nulli; STIGMATA reflexa, *fig.* 6.

SEMINA: plurima, ſubrotunda, compreſſa, ſuſca, apice reflexa, *fig.* 7.

ROOT perennial, conſiſting of numerous white fibres.

STALK generally about two feet high, upright, hollow, round, ſomewhat hairy, much branched at top.

LEAVES: *Radical* leaves ſtanding on long upright foot-ſtalks, tripartite, the middle lobe trifid, the ſide ones bilobous, and all of them ſharply indented, ſlightly hirſute, the upper ſurface particularly at the baſe frequently of a purple colour, the veins underneath prominent.
Leaves of the *Stalk* like the radical leaves, but more finely divided, and ſtanding on ſhorter foot-ſtalks, at top linear and ſeſſile.
The FOOT-STALKS with their ſheaths hairy.

FOOT-STALKS of the flowers round.

CALYX: a PERIANTHIUM of five leaves, ſpreading, of a yellow colour and hairy, the leaves oval, concave, and membranous at the edges, *fig.* 1.

COROLLA: five PETALS, yellow and ſhining, nearly heart-ſhaped, ſometimes notched, ſometimes entire, *fig.* 2.

STAMINA: FILAMENTS numerous, a little dilated at top, *fig.* 5, 4. ANTHERÆ yellow, obtuſe, bending a little inward, *fig.* 4.

NECTARY: a ſmall ſcale, ſlightly notched at top, at the baſe of each petal, *fig.* 3.

PISTILLUM: GERMINA numerous, forming a little head; STYLES none; STIGMATA reflex, *fig.* 6.

SEEDS numerous, roundiſh, flat, of a brown colour, bending back at the top, *fig.* 7.

Moſt of the Ranunculi or Crowfoots are acrid, and in ſome degree poiſonous; and the ſpecies above deſcribed poſſeſſes this property in a very conſiderable degree; hence Linnæus has given it the name of *acris*: even pulling up the plant, and carrying it to ſome little diſtance, we have known ſufficient to produce a conſiderable inflammation in the palm of the perſon's hand who held it. Cattle in general will not eat it; yet ſometimes, when they are turned hungry into a new field of Graſs, or have but a ſmall ſpot to range in, they will feed on it, and hence their mouths, as we have been credibly informed, have become ſore and bliſtered. When made into hay it loſes its acrid property; but is too ſtalky and hard to afford good Nouriſhment. It ſhould ſeem therefore to be the intereſt of the Farmer as much as poſſible to root out this ſpecies from his Meadows, that its place may be ſupplied with good ſweet graſs.

It grows too frequently in moſt of our meadows, and flowers in June and July.

The common people about town, and in many parts of the country, call this and the other yellow Crowfoots by the names of *Butter-cups* and *Butter-flowers*: and this name ſeems to have originated from a ſuppoſition that the yellow colour of butter was owing to theſe plants. That this ſhould be the caſe, ſeems ſcarce probable; certainly it receives no good taſte from it.

BROMUS STERILIS. BARREN BROME GRASS.

BROMUS *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA.
Raii Gen. 27. HERBÆ GRAMINIFOLIÆ, FLORE IMPERFECTO CULMIFERÆ.
BROMUS *ſterilis*, panicula patula, ſpiculis oblongis diſtichis, glumis ſubulato-ariſtatis. *Lin. Syſt. Vegetab. p.* 103.
BROMUS panicula nutante; locuſtis ſeptifloris; glumis argute lanceolatis, lineatis, ſubhirſutis. *Haller. hiſt. n.* 1505.
FESTUCA avénacea ſterilis elatior. *Bauhin. pin.* 9, 10.
BROMOS herba, ſive avena ſterilis. *Parkinſon*, 1147. Bromos ſterilis. *Gerard emac. Raii Synop. p.* 412.
Great wild Oat-Graſs or Drank. *Hudſon. Fl. Angl. p.* 40. *Scopoli. Fl. Carniol. p.* 78.

RADIX fibroſa.
CULMI pedales ad bipedales, ſuberecti, teretes, læves, ad baſin infracti; Geniculi tumidi.

FOLIA longa, plana, unà cum vaginis, molliſſime villoſa.

PANICULA magna, nutans: PEDUNCULI plerumque ſimplices, *ad baſin tumidi.*

SPICULÆ biunciales, ſubcompreſſæ, apice divergentes, *fig.* 1.

CALYX: GLUMA bivalvis, Valvulis inæqualibus, lineari-lanceolatis, *fig.* 2.

COROLLA: bivalvis, Valvulis inæqualibus, exteriore longiore, concava, ſtriata, apice membranacea, bifida, ARISTA recta Corollâ duplo longiore terminata, *fig.* 3. Valvulâ interiore planiuſcula, ciliata, *fig.* 4.

NECTARIUM: GLUMULÆ duæ acuminatæ, ad baſin biglanduloſæ, *fig.* 6.

STAMINA: FILAMENTA tria, capillaria, ANTHERÆ flavæ, *fig.* 5.

PISTILLUM: GERMEN oblongum, apice truncatum ſive emarginatum, pars inferior ex quâ ſtyli prodeunt, et quod verum Germen eſſe videtur, nitida, *fig.* 7. pars ſuperior albida, villoſa, *fig.* 8. STYLI duo plumoſi, patuli, *fig.* 9.

SEMEN ex purpureo-fuſcum, oblongum, ariſtatum, calyce tectum, *fig.* 10. denudatum, *fig.* 11.

ROOT fibrous.
STALKS from one to two feet high, nearly upright, round and ſmooth, at bottom crooked or elbowed; the Joints ſwelled.
LEAVES long and flat, covered, together with their ſheaths, with ſoft ſhort hairs.
PANICLE large, and drooping, the PEDUNCLES generally ſimple, and *ſwelled at their baſe.*
SPICULÆ about two inches long, flattiſh, and diverging toward the extremity, *fig.* 1.
CALYX: a GLUME of two Valves, the Valves inequal, long and narrow, *fig.* 2.
COROLLA: compoſed of two Valves, which are inequal, the exterior Valve longeſt, concave, ſtriated, at top membranous and bifid, terminated by a ſtraight ARISTA twice the length of the Corolla, *fig.* 3. the interior Valve nearly flat, and ciliated, *fig.* 4.
NECTARY: two ſmall long-pointed GLUMES with a ſmall gland at the baſe of each, *fig.* 6.
STAMINA: three ſmall FILAMENTS: the ANTHERÆ yellow, *fig.* 5.
PISTILLUM: the GERMEN oblong, at top flat or ſlightly emarginate, the bottom part from whence the Styles proceed, and which ſeems to be the true Germen, is ſmooth and ſhining, *fig.* 7. the upper part white and villous, *fig.* 8. two STYLES, feathery and ſpreading, *fig.* 9.
SEED of a purpliſh brown colour, oblong, bearded, encloſed within the calyx, *fig.* 10. the calyx ſtripped off, *fig.* 11.

Much praiſe is due to the late ingenious Mr. STILLINGFLEET for his attempts to introduce, more generally among Farmers, a knowledge of our moſt uſeful Engliſh Graſſes: his obſervations on this ſubject are ſo exceedingly pertinent, that the inſertion of them cannot fail to prove highly acceptable to ſuch as have the promotion of Agriculture at heart.

"It is wonderfull to ſee how long mankind has neglected to make a proper advantage of plants of ſuch importance, "and which in almoſt every country are the chief food of cattle. The farmer for want of diſtinguiſhing, and ſelecting "graſſes for ſeed, fills his paſture either with weeds, or bad, or improper graſſes; when by making a right choice, "after ſome trials he might be ſure of the beſt graſs, and in the greateſt abundance that his land admits of. At preſent "if a farmer wants to lay down his land to graſs, what does he do? he either takes his ſeeds indiſcriminately from "his own foul hay-rick, or ſends to his next neighbour for a ſupply. By this means, beſides a certain mixture of all "ſorts of rubbiſh, which muſt neceſſarily happen; if he chances to have a large proportion of good ſeeds, it is not "unlikely, but that what he intends for dry land may come from moiſt, where it grows naturally, and the contrary. "This is ſuch a ſlovenly method of proceeding, as one would think could not poſſibly prevail univerſally; yet this "is the caſe as to all graſſes, except the darnel graſs, and what is known in ſome few countries by the name of the "Suffolk graſs; and this latter inſtance is owing, I believe, more to the ſoil than any care of the huſbandman. "Now would the farmer be at the pains of ſeparating once in his life half a pint, or a pint of the different kinds of "graſs ſeeds, and take care to ſow them ſeparately; in a very little time he would have wherewithal to ſtock his "farm properly, according to the nature of each ſoil, and might at the ſame time ſpread theſe ſeeds ſeparately over "the nation by ſupplying the ſeed-ſhops. The number of graſſes fit for the farmer is, I believe, ſmall; perhaps half "a dozen, or half a ſcore are all he need to cultivate; and how ſmall the trouble would be of ſuch a taſk, and how "great the benefit, muſt be obvious to every one at firſt ſight. Would not any one be looked on as wild who ſhould "ſow *wheat*, *barley*, *oats*, *rye*, *peaſe*, *beans*, *vetches*, *buck-wheat*, *turnips*, and weeds of all ſorts together? yet how is it "much leſs abſurd to do what is equivalent in relation to graſſes? does it not import the farmer to have good hay "and graſs in plenty? and will cattle thrive equally on all ſorts of food? We know the contrary. Horſes will "ſcarcely eat hay, that will do well enough for oxen and cows. Sheep are particularly fond of one ſort of graſs, "and fatten upon it faſter, than on any other in Sweden, if we may give credit to Linnæus. And may they not do "the ſame in England? How ſhall we know till we have tried? Nor can we ſay that what is valuable in Sweden "may be inferior to many other graſſes in England; ſince it appears by the Flora Suecica that they have all the "good ones that we have. But however this may be, I ſhould rather chuſe to make experiments, than conjectures."

The preſent Graſs is not one of thoſe which are worth the Farmer's cultivation; but ſo much the reverſe, that moſt Authors have called it *ſterilis*, not becauſe it is really barren, but from its inutility with reſpect to cattle.

It grows exceeding common under hedges, and flowers in May and June.

In order to have a clear idea of the ſtructure of the parts of fructification in the Graſſes, they ſhould be examined juſt at the time, or rather before the *Antheræ* have diſcharged their *Pollen*; a ſmall ſpace of time makes a conſiderable alteration in their appearance.

In this ſpecies of *Bromus*, as well as in the *Bromus mollis*, the Styles proceed from the *middle* of the Germen, and not from the *top*; this is a peculiarity which ſeems to have eſcaped the notice of *Schreber*, who has written profeſſedly on the Graſſes, and examined them with more accuracy than any preceding Writer. In his figures the *Styles* proceed always from the Apex of the *Germen*.



Bromus sterilis


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Orobus tuberosus

OROBUS TUBEROSUS. WOOD PEA.

OROBUS *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA.

Raii Synop. Gen. 23. HERBÆ FLORE PAPILIONACEO, SEU LEGUMINOSÆ.

OROBUS *tuberoſus* foliis pinnatis, lanceolatis; ſtipulis ſemiſagittatis integerrimis, caule ſimplici. *Lin. Syſt. Vegetab. p.* 550. *Fl. Suecic. n.* 642.

OROBUS caule ſimplici; foliis ſenis ellipticis; radice tuberoſa. *Hall. Hiſt. n.* 417.

ASTRAGALUS ſylvaticus, foliis oblongis glabris. *Bauhin. pin.* 351. *Gerard. emac.* 1237.

LATHYRUS ſylveſtris lignoſior. *Parkinſon*, 1072. *Raii Synop. p.* 324. Wood-Peaſe, or Heath Peaſe. *Hudſon. Fl. Angl. p.* 274. *Scopoli. Fl. Carn. n.* 883.

RADIX perennis, tuberoſa,

CAULIS ſimplex, erectus, pedalis, alatus, ſubtortuoſus.

FOLIA pinnata, CIRRHO brevi recto terminata, Pinnarum paria duo, tria, elliptica, mucronata, glabra, ſubtus cæruleſcentia.

STIPULÆ ſemiſagittatæ, ſæpe integræ, ſæpius vero ad baſin hamatæ, dente unico aut pluribus.

RAMI florigeri, 1, 2, 3, aut plures, ex foliorum alis, primum nutantes, FLORES pulchelli, ex rubro purpurei, demum cæruleſcentes.

CALYX: PERIANTHIUM monophyllum, tubulatum, purpureum, baſi obtuſum: ore quinquedentato, denticulis tribus inferioribus acutioribus, duobus ſuperioribus brevioribus, obtuſe diviſis, ſubaſſurgentibus, *fig.* 1.

COROLLA *Papilionacea*: VEXILLUM obcordatum, reflexum, *fig.* 2. ALÆ conniventes, Carinâ connexæ, Unguis linearis, *fig.* 5. Lamina obtuſa. CARINA, *fig.* 7. acuminata, aſſurgens, marginibus cavis ad Alas recipiendas, *fig.* 9.

STAMINA: FILAMENTA diadelphia (ſimplex et novemfidum) adſcendentia, *fig.* 11, 17. ANTHERÆ flavæ, *fig.* 12. ad baſin filamenti ſimplicis et ſuperioris, foramina duo obſervantur, *fig.* 16.

PISTILLUM: GERMEN cylindraceum, compreſſum, STYLUS filiformis, erectus, lateri interiori prope apicem villoſus, *fig.* 13.

PERICARPIUM LEGUMEN teres, longum, primum rubrum, demum nigrum, *fig.* 14.

SEMINA plura, ſubrotunda, e luteo-fuſca, *fig.* 15.

ROOT perennial and tuberous.

STALK ſimple, upright, about a foot high, winged and ſomewhat twiſted.

LEAVES pinnated, terminated by a ſhort ſtrait CIRRHUS, conſiſting of two or three pair of Pinnæ which are elliptical, and end in a ſmall ſharp point, ſmooth, and underneath blueiſh.

STIPULÆ ſemiſagittate, frequently entire but more often jagged at bottom, with one or ſeveral teeth.

BRANCHES which ſuſtain the flowers 1, 2, 3, or more, ſpringing from the boſom of the leaves, at firſt drooping, the FLOWERS beautiful, of a reddiſh purple colour, becoming blue as they go off.

CALYX: a PERIANTHIUM of one leaf, tubular, purple, blunt at bottom, the mouth quinquedentate, the three lowermoſt teeth ſharpeſt, the two uppermoſt ſhorteſt, bluntly divided, and turned a little upwards, *fig.* 1.

COROLLA *Papilionaceous:* the VEXILLUM heart-ſhaped, turning back, *fig.* 2. the WINGS connivent and connected with the Carina, the Claw linear, *fig.* 5. the Lamina obtuſe, *fig.* 6. the CARINA or Keel acuminate, riſing upward, the edges hollow for the reception of the Alæ or Wings, *fig.* 9.

STAMINA: ten FILAMENTS, nine united into one body below, and one ſeparate at top, *fig.* 11, 17. riſing upward, ANTHERÆ yellow, *fig.* 12. at the baſe of the ſimple and uppermoſt filament two ſmall holes are conſpicuous, *fig.* 16.

PISTILLUM: GERMEN cylindrical, and flattiſh, STYLE thread-ſhaped, interiorly near the tip villous, *fig.* 13.

SEED-VESSEL, a LEGUMEN, round and long, firſt red, when ripe black, *fig.* 14.

SEEDS ſeveral, roundiſh, of a yellowiſh brown colour, *fig.* 15.

This elegant ſpecies of Orobus grows very plentifully in all our Woods about Town; it ſeems to delight in a ſtrong clayey ſoil. It produces its bloſſoms in May and June, and its ſeed is ripe in July. The root is large and tuberous, deeply ſituated in the Earth, and taken up with difficulty; it is not made any particular uſe of with us, but is conſiderably eſteemed in ſome parts of Great Britain.

My very worthy and ingenious Friend the Rev. Mr. *Lightfoot*, of *Uxbridge*, has favoured me with the following account of its uſes, which he obſerved in his late tour through Scotland:

"The *Orobus tuberoſus* is very common in *Scotland*, both in the *Lowlands*, *Highlands*, and the *Hebrides*. It is "called in the Erſe Language *Cor-meille*. The Highlanders dig up the Roots, and dry them in their pockets, and "chew them like Tobacco or Liquorice Root, to reliſh their Liquor, and to repel Hunger and Thirſt. In *Breadal-*"*bane* and *Roſs-ſhire* they ſometimes ſteep them in Water, and make an agreeable fermented Liquor with them, "which they eſteem to be good for Diſorders, of the Thorax. It has a ſweetiſh Taſte, ſomewhat like Liquorice Roots. "Fond as the Highlanders were of this Root, they frequently uſed to change it with me for ſome Pig-tail Tobacco, "their favourite Indulgence."

HOTTONIA PALUSTRIS. WATER HOTTONIA, or WATER VIOLET.

HOTTONIA *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI, FLORE MONOPETALO.

HOTTONIA *paluſtris*, pedunculis verticillato-multifloris. *Lin. Syſt. Vegetab. p.* 164.

HOTTONIA florum verticillis ſpicatis. *Haller. hiſt. p.* 632.

MILLEFOLIUM aquaticum ſeu Viola aquatica, caule nudo. *Bauhin. pin.* 141. *Parkinſon*, 1256.

VIOLA paluſtris. *Gerard. emac.* 826. *Raii Synop. p.* 285. *Hudſon. Fl. Angl. p.* 72. *Scopoli Flor. Carniol. n.* 213. *Fl. Dan. icon.* 487.

RADIX e plurimis fibrillis capillaceis albis conſtat, quæ in limum profunde dimittuntur.

ROOT conſiſts of numerous white capillary fibres, which penetrate deep into the mud.

CAULIS ſive SCAPUS floriferus, pedalis, ſimplex, erectus, multiflorus, verſus apicem glandulis ſcabriuſculus, ad baſin foliis plurimis inſtructus, unde per aquam longe excurrunt caules plures qui fibrillas dimittunt.

STALK or flowering SCAPUS, a foot high, ſimple, upright, ſuſtaining many flowers, towards the top roughiſh with little glands, furniſhed at bottom with numerous leaves, from whence ſeveral ſtalks proceed, and run out to a conſiderable length through the water throwing out numerous white fibres.

FOLIA plurima, plerumque immerſa, pinnata, in apicibus caulium juniorum denſa, reflexa, pinnis linearibus planis.

LEAVES numerous, generally under the water, pinnated, growing in tufts on the tops of the young ſtalks, bending downwards, the Pinnæ linear and flat.

FLORES pallide purpurei, verticillati, ſpicati, pedunculi ad. 10. Bractæâ, ad baſin inſtructi, poſt floreſcentiam reflexi.

FLOWERS of a pale purple colour, growing in whirls, and forming a ſpike. Peduncles to 10 in number, furniſhed at bottom with a Bractea, when the flowers are gone off turning downwards.

CALYX: PERIANTHIUM monophyllum, quinquepartitum: LACINIIS linearibus, erecto-patulis, *fig.* 1.

CALYX: a PERIANTHIUM of one leaf, divided into five SEGMENTS, which are linear, upright and ſomewhat ſpreading, *fig.* 1.

COROLLA: monopetala, hypocrateriformis, TUBUS longitudine calycis, LIMBUS quinquefidus, planus: LACINIIS ovato-oblongis, emarginatis, *fig.* 2.

COROLLA: monopetalous and ſalver-ſhaped, the TUBE the length of the calyx; the LIMB divided into five ſegments and flat; the SEGMENTS of an oval oblong ſhape with a notch at the extremity, *fig.* 2.

STAMINA: FILAMENTA quinque, ſubulata, brevia, erecta. ANTHERÆ oblongæ, flavæ, *fig.* 3.

STAMINA: five FILAMENTS tapering, ſhort, and upright, ANTHERÆ oblong and yellow, *fig.* 3.

PISTILLUM: GERMEN ſubgloboſum. STYLUS filiformis, brevis. STIGMA globoſum, *fig.* 4.

PISTILLUM: GERMEN roundiſh, STYLE thread-ſhaped and ſhort, STIGMA ſpherical, *fig.* 4.

PERICARPIUM: CAPSULA globoſa, unilocularis, ſubpellucida, *fig.* 5.

SEED-VESSEL: a round CAPSULE of one cavity, ſlightly tranſparent, *fig.* 5.

SEMINA plurima, ovata, pallide fuſca, *fig.* 7. receptaculo globoſo intra capſulam affixa, *fig.* 6.

SEEDS numerous, oval, of a pale brown colour, *fig.* 7. affixed to a round receptacle within the capſule, *fig.* 6.

This ſingular plant abounds in moſt of our watery Ditches, particularly in ſuch as divide the Meadows, and flowers in May and June, continuing for a conſiderable time in bloſſom; among a variety of other places it may be found in a ditch on the right-hand ſide of the Field Way leading from Kent-ſtreet Road to Peckham.

We do not find any author that mentions its poſſeſſing any properties to recommend it but its beauty and ſingularity, both of which it poſſeſſes in a degree ſufficient to command our admiration.

The leaves generally grow beneath the ſurface of the water, and afford a Nidus, if not Nouriſhment, to the freſh-water Periwinkle, and ſome other ſmall ſhell-fiſh.

Antient Botaniſts have given it the names of *Millefolium aquaticum* and *Viola aquatica.* The great number of its leaves induced them, with ſome propriety, to call it *Millefolium*; but why they ſhould call it a *Viola* ſeems difficult to determine, as the bloſſom has nothing in its ſtructure ſimilar to the flowers of that Genus. Boerhaave afterwards called it *Hottonia*, in honour of Dr. Hotton, which name Linnæus has continued.



Hottonia palustris.



Veronica Chamædrys.

J. Hilburn pinxt et sculpsit.

VERONICA CHAMÆDRYS. WILD GERMANDER.

VERONICA *Linnæi Gen. Pl.* DIANDRIA MONOGYNIA.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI, FLORE MONOPETALO.

VERONICA *Chamædrys* racemis lateralibus, foliis ovatis rugoſis dentatis ſeſſilibus, caule bifariam piloſo. *Lin. Syſt. Vegetab. p.* 57. *Fl. Suecic. p.* 6.

VERONICA folis cordatis ſubrotundis, hirſutis, nervoſis, ex alis racemoſa. *Haller. hiſt. n.* 536.

CHAMÆDRYS ſpuria minor rotundifolia. *Bauhin. pin.* 249.

CHAMÆDRYS ſpuria ſylveſtris. *Parkinſon* 107.

CHAMÆDRYS ſylveſtris. *Gerard. emac.* 657. *Raii Syn.* 281. Wild Germander, *Hudſon. Fl. Angl. p.* 5. *Scopoli. Fl. Carniol. p.* 15. (a). *Oeder. Fl. Dan. Icon.* 448.

RADIX perennis, repens, fibroſa.

ROOT perennial, creeping, and fibrous.

CAULES numeroſi, ducumbentes, teretes, duri, *bifariam denſe hirſuti*, ramoſi.

STALKS numerous, ſpreading, round, hard, *hairy on each ſide*, hairs very thick together, branched.

FOLIA cordato-ovata, oppoſita, nunc ſeſſilia nunc petiolis brevibus inſidentia, ſerrata, venoſa, hirſutula.

LEAVES of an heart-ſhaped oval form, oppoſite, generally ſeſſile, ſometimes ſtanding on ſhort foot-ſtalks, ſerrated, veiny, and ſlightly hirſute.

FLORES numeroſi, ad 20, cærulei, petiolati: *Petioli* BRACTÆA lanceolatâ ſuffulti; RACEMI longi, nunc oppoſiti nunc ſolitarii.

FLOWERS numerous, to 20, of a bright blue colour, forming long RACEMI (which are ſometimes oppoſite, ſometimes ſingle), ſtanding on *foot-ſtalks*, each of which is ſupported by a long-pointed BRACTÆA.

CALYX: PERIANTHIUM quadripartitum, perſiſtens, foliolis lanceolatis, hirſutulis, *fig.* 1.

CALYX: a PERIANTHIUM divided into four ſegments, and continuing, the ſegments lanceolate and ſlightly hairy, *fig.* 1.

COROLLA monopetala, rotata, tubus breviſſimus interne ad inferiorem partem villoſus, LIMBO quadripartito, plano, laciniis ſubcordatis ad baſin venis ſaturatioribus ſtriatis, inferiore anguſtiore, *fig.* 2.

COROLLA monopetalous and wheel ſhaped, the TUBE very ſhort, internally villous on the lowermoſt ſide, the LIMB flat, and divided into four ſegments, the ſegments ſomewhat heart-ſhaped, ſtriated at bottom with veins of a purple colour, the lowermoſt ſegment narrower than the reſt, *fig.* 2.

STAMINA: FILAMENTA duo apice incraſſata, adſcendentia, *fig.* 3. ANTHERÆ ſagittatæ, *fig.* 4. POLLEN album, *fig.* 6.

STAMINA: two FILAMENTS, thickeſt at top, riſing upward, *fig.* 3. the ANTHERÆ arrow-ſhaped, *fig.* 4. the POLLEN white.

PISTILLUM: GERMEN compreſſum glandula nectarifera cinctum: STYLUS declinatus, cæruleſcens, STIGMA obtuſum, purpureum, *fig.* 5.

PISTILLUM: the GERMEN flattiſh, ſurrounded at bottom by a nectariferous gland, *fig.* 6. the STYLE hanging downwards, blueiſh; the STIGMA blunt, and purple, *fig.* 5.

PERICARPIUM: CAPSULA cordata, *ſubcompreſſa*, pallide fuſca, *calyce paulo brevior*, ad marginem hirſutulum, *fig.* 7.

SEED-VESSEL: a CAPSULE, heart-ſhaped, *flattiſh*, of a light brown colour, *a little ſhorter than the calyx*, and ſlightly hairy at the edge, *fig.* 7.

SEMINA: plura, compreſſa, flaveſcentia, *fig.* 8.

SEEDS ſeveral, flat, of a yellowiſh brown colour, *fig.* 8.

The flowers of this Veronica are the largeſt and moſt ſpecious of all the Plants of that Genus which grow wild in this Kingdom. Many plants with leſs beauty are cultivated in our Gardens with the greateſt care.

The leaves have been recommended by ſome writers as a ſubſtitute for *Tea*.

It bears a conſiderable reſemblance to the *Veronica montana*, but differs eſſentially from that plant in the ſize of its Seed-veſſels, and the great number of flowers which it bears on its Racemi. See *Jacquin. Flor. Auſtriac. Vol.* 2.

When growing wild, the leaves are uſually ſeſſile, or placed on very ſhort foot-ſtalks: when cultivated, they become larger, and the foot-ſtalks moderately long; a kind of monſtroſity, which LINNÆUS has likewiſe obſerved, is very frequent on the leaves at the extremity of the ſtalk, which are collected into a very hairy white knob. On opening one of theſe, I found two or three Inſects in their Pupa or Chryſalis ſtate, which moſt probably would have produced ſome ſpecies of Fly. This appearance is very common at the latter end of Summer.

This is an early blowing plant, and grows very common on dry banks, under hedges, and in orchards. It flowers in May and June.

ANTIRRHINUM *LINARIA.* COMMON YELLOW TOAD FLAX.

ANTIRRHINUM *Linnæi Gen. Pl.* DIDYNAMIA ANGIOSPERMIA.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

ANTIRRHINUM *Linaria* foliis lanceolato-linearibus confertis, caule erecto, ſpicis terminalibus ſeſſilibus, floribus imbricatis. *Lin. Syſt. Vegetab. p.* 466. *Fl. Suecic.* 217.

ANTIRRHINUM foliis linearibus adſcendentibus congeſtis, caule erecto ſpicato. *Haller. hiſt. V.* 1. *p.* 145.

LINARIA vulgaris lutea flore majore. *Bauhin. pin. p.* 212.

LINARIA lutea vulgaris. *Gerard. emac.* 550. vulgaris noſtras. *Parkinſon* 458. *Raii Synop. p.* * 281. *Hudſon. Fl. Angl. p.* 238. *Scopoli Fl. Carniol. p.* 442.

RADIX perennis, alba, dura, lignoſa, per terram reptando immenſum ſe propagans.

CAULES plerumque plures ex eadem radice, erecti, pedales aut cubitales, folioſiſſimi, teretes, læves.

FOLIA linearia, acuta, conferta, ſparſa, glauca.

FLORES lutei, palato croceo, in ſummis caulibus in ſpicas denſas imbricatim congeſti.

CALYX: PERIANTHIUM quinquepartitum, breve, perſiſtens, laciniis ovato-lanceolatis, ſuperiore cæteris paulo longiore, duabus inferioribus magis dehiſcentibus, *fig.* 1.

COROLLA monopetala ringens. lutea, *fig.* 3. TUBUS brevis; LIMBUS bilabiatus, *fig.* 4. LABIUM *ſuperius* bifidum, laciniis primum deflexis, poſtea reflexis conniventibus, *fig.* 5.; LABIUM *inferius* trifidum, laciniis obtuſis, intermedio breviore minore, *fig.* 6.; FAUX clauſa PALATO prominente, bifido, croceo, ad baſin villoſo, *fig.* 7.

STAMINA: FILAMENTA quatuor, alba, ſub labio ſuperiori incluſa, quorum duo breviora, ad baſin villoſa, *fig.* 9.; ANTHERÆ flavæ, conniventes, *fig.* 10.

PISTILLUM: GERMEN ſubrotundum, STYLUS filiformis, albus; STIGMA obtuſum.

PERICARPIUM: CAPSULA ovato-cylindracea, bilocularis, apice in plures lacinias dehiſcens, *fig.* 14, 15, 16.

SEMINA numeroſa, nigra, plana, medio extuberantia, *fig.* 17.

ROOT perennial, white, hard and woody, creeping under the earth, and propagating itſelf very much.

STALKS: generally ſeveral ariſe from the ſame root, upright, from one to two feet high, very full of leaves, round and ſmooth.

LEAVES linear, pointed, growing very thick together on the ſtalk, without any regular order, ſmooth, and of a blueiſh colour.

FLOWERS yellow, with the palate of an orange or ſaffron colour, placed one over another in thick ſpikes on the top of the Stalks.

CALYX: a PERIANTHIUM divided into five ſegments ſhort and continuing, the ſegments oval and pointed, the upper one a little longer than the reſt, the two inferior ones gaping wideſt, *fig.* 1.

COROLLA monopetalous, ringent, and yellow, *fig.* 3. the TUBE ſhort; the LIMB compoſed of two LIPS, *fig.* 4.; the *upper* LIP bifid, the ſegments firſt bending down, afterwards turned back and cloſing together, *fig.* 5.; the *lower* LIP trifid, the ſegments obtuſe, the middle one ſhorteſt and leaſt, *fig.* 6.; the MOUTH cloſed by a PALATE prominent, bifid, of a ſaffron colour, and villous at bottom, *fig.* 7.

STAMINA: four white FILAMENTS, incloſed under the upper lip of the Borolla, two of which are ſhorter than the other two, at bottom villous, *fig.* 9.; ANTHERÆ yellow, ſlightly connected together, *fig.* 10.

PISTILLUM: GERMEN roundiſh, STYLE filiform and white; STIGMATA obtuſe.

SEED-VESSEL a CAPSULE of an oval and cylindrical ſhape, having two cavities, and ſplitting at top into ſeveral diviſions, *fig.* 14, 15, 16.

SEEDS numerous, black, flat, protuberant in the middle, *fig.* 17.

Mr. *Ray*, in his *Hiſtoria Plantarum*, has collected the Authorities of ſeveral writers who ſpeak highly of the medical virtues of this Plant. At the ſame time that we by no means believe in all the Virtues which are attributed to many plants by the old Authors, we would be careful of rejecting all their accounts, particularly when there is ſome reaſon to think they may be founded in Truth; the mention of them may at leaſt ſerve to excite ſuch of the Faculty as have proper opportunities to give them a fair trial, and either reject them entirely, or bring them more generally into practice.

According to ſome it operates both by Stool and Urine; and ſo much by the latter, as to acquire among the *Germans* the name of *Harnkrout*. A ſmall glaſs of the diſtilled Water, mixed with a drachm of the Bark of the *Ebulus* or *Water Elder* in powder, powerfully provokes Urine, and is recommended in Dropſical Caſes. The diſtilled water or juice of the Plant, put in the Eyes, takes away the redneſs and inflammation of them, as TRAGUS aſſerts, from his own long obſervation and experience. Made into an Ointment with lard, and mixed with the yolk of Egg, it takes away the violent pain ariſing from the Piles.

The flowers of this plant are frequently found double with two or more Spurs, and a ſingular variety of it, which LINNÆUS calls *Peloria*, is ſaid by Mr. HUDSON to grow about *Clapham* in *Surrey:* this rare monſtroſity we ſhall not fail to figure.

In its common ſtate, the Toad Flax grows very common on banks by the road ſides, which it decorates not a little by its ſingular and beautiful Flowers. It may with the greateſt eaſe be cultivated in Gardens, and raiſed either from Seeds or Roots. The Seed is ripe at the latter end of September.



Antirrhinum Linaria.



Erigeron acre.

ERIGERON ACRE. PURPLE ERIGERON.

ERIGERON *Linnæi Gen. Pl.* SYNGENESIA POLYGAMIA SUPERFLUA.

Raii Synopſis. HERBÆ FLORE COMPOSITO, SEMINE PAPPOSO NON LACTESCENTES, FLORE DISCOIDE.

ERIGERON *Acre* pedunculis alternis unifloris. *Lin. Sp. Pl.* 1211.

ERIGERON *polymorphum Scopoli. Fl. Carniol.* DIAGN. folia lanceolata, baſi et apice attenuata. Germina villoſa. Pappus ruffus.

ERIGERON caule alterne ramoſo, petiolis unifloris, ſemifloſculis pappum æquantibus, et ſemifloſculis pappum ſuperantibus. *Haller. hiſt. n.* 85. 86.

CONYZA cœrulea acris. *Bauhin. Pin.* 265. *Gerard. emac.* 484.

ASTER arvenſis cœruleus acris. *Raii Syn.* 175. Blue-flowered ſweet Fleabane.

CONYZA odorata cœrulea. *Parkinſon* 126.

SENECIO ſive Erigeron cœruleus. *I. B.* II. 1043. *Hudſon. Fl. Angl.* 314. *Oeder Fl. Dan. Tab.* 292.

RADIX perennis, fibroſa, fibris pallide fuſcis.

ROOT perennial and fibrous, the fibres of a pale brown colour.

CAULIS erectus, rigidus, pedalis, pupureus, ſtriatus, folioſus, hirſutus, in quibuſdam vix ramoſus, in aliis ramoſiſſimus.

STALK upright, rigid, about a foot high, purple, ſtriated, leafy, and hirſute, in ſome ſcarce branched at all, in others very much ſo.

FOLIA alterna, ſeſſilia, hirſuta, inferiora obtuſe ovata baſi anguſtiora, ſuperiora anguſta, reflexa, tortuoſa, ramorum linearia, ſuberecta.

LEAVES alternate, ſeſſile, hirſute, the bottom ones of a blunt oval ſhape, and narrow at bottom, the upper ones narrow, turning back and twiſted, thoſe of the branches linear and nearly upright.

FLORES erecti, nunquam ſeſe explicantes ſicut plerique flores Claſſis Syngeneſiæ, externi purpurei, interni flaveſcentes, cum cavitate in medio.

FLOWERS upright, never expanding themſelves like moſt of the flowers of the Claſs Syngeneſia, externally purple, internally yellow, with a cavity in the middle.

CALYX *communis* imbricatus, ſquamis ſubulatis, erectis, purpureis, hirſutis, laxis, *fig.* 1.

CALYX: the *common* Calyx compoſed of a number of ſcales, which are narrow and pointed, upright, purpliſh, hirſute, and looſely connected, *fig.* 1.

COROLLA *compoſita*, radiata; *Corollulæ hermaphroditæ* tubuloſæ, numeroſæ in diſco, *fig.* 2. *femineæ* ligulatæ, pauciores in radio, *fig.* 3. *Propria* hermaphroditi infundibuliformis, flava, limbo quinquefido, *fig.* 2. *Femineæ* ligulata, linearis, erecta, purpurea, hermaphroditâ longior, *fig.* 3.

COROLLA *compound* and radiated; the *hermaphrodite flowers* tubular and numerous in the middle, *fig.* 2. the *female flowers* ligulate, and fewer in the circumference, *fig.* 3. each *hermaphrodite* floſcule funnel-ſhaped, yellow, with the limb divided into five ſegments, *fig.* 2. each *female* floſcule, linear, upright, purple, longer than the hermaphrodite flower, *fig.* 3.

STAMINA *hermaphroditis*: FILAMENTA quinque, capillaria, breviſſima: ANTHERÆ in tubum coalitæ.

STAMINA: in the *hermaphrodite* flowers: five FILAMENTS, very ſmall and ſhort; the ANTHERÆ united into a tube.

PISTILLUM *hermaphroditis*: GERMEN coronatum Pappo corolla paulo longior, *fig.* 4. STYLUS filiformis longitudine Pappi, *fig.* 5. STIGMA bifidum *fig.* 6.: *Femineis*: GERMEN tenue, Pappo longitudine fere Corollæ, *fig.* 7. STIGMATA duo, tenuiſſima, *fig.* 8.

PISTILLUM of the *hermaphrodite flowers*; the GERMEN crowned with a Pappus or Down a little longer than the Corolla, *fig.* 4. the STYLE filiform, the length of the Pappus, *fig.* 5. STIGMA bifid, *fig.* 6.: of the *Female flowers*; the GERMEN ſlender, the Pappus nearly the length of the Corolla, *fig.* 7. two STIGMATA very ſlender, *fig.* 8.

SEMINA oblonga, pallide fuſca, *hirſuta*, *lente auct. fig.* 9. PAPPUS ſeſſilis, luteſcens, ſimplex, *fig.* 10.

SEEDS oblong, of a pale brown colour, *hirſute*, *magnified*, *fig.* 9. PAPPUS ſeſſile, yellowiſh and ſimple, *fig.* 10.

The Erigeron Acre is by no means a common plant in our neighbourhood, yet occurs very frequently on the hilly and chalky ground about *Charlton Wood*, particularly in the chalk pits on the left-hand ſide of the lane behind the Church.

It flowers in the months of Auguſt and September, and is conſidered as a pretty ſure indication of a barren ſoil.

It has a taſte ſomewhat warm and biting, and hence has received its name of *Acris*.

We have rather choſen to retain LINNÆUS's name of *Erigeron* than adopt RAY's name of *Fleabane*, which tends to confound it with the Genus *Conyza*.

It frequently grows much taller, and is often found much ſmaller, than the ſpecimen we have figured.

VERONICA SERPYLLIFOLIA. LITTLE SMOOTH SPEEDWELL, or PAUL'S BETONY.

VERONICA *Linnæi Gen. Pl.* DIANDRIA MONOGYNIA.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI, FLORE MONOPETALO.

VERONICA *ſerpyllifolia* racemo terminali ſubſpicato, foliis ovatis glabris, crenatis. *Linnæi Syſt. Vegetab. p.* 56. *Fl. Suecic. p.* 6.

VERONICA caule recto, foliis ovatis, glabris, crenatis, petiolis ex alis unifloris, breviſſimis. *Hall. hiſt. n.* 546.

VERONICA pratenſis ſerpyllifolia. *Bauhin. pin.* 247.

VERONICA pratenſis minor. *Parkinſon.* 551.

VERONICA minor. *Gerard emac.* 627.

VERONICA fœmina quibuſdam, aliis Betonica Pauli Serpyllifolia. *I. Bauhin.* III. 285.

VERONICA *Raii Syn. p.* 279. *n.* 3. *Hudſon, Fl. Angl. p.* 4. *n.* 4. *Scopoli. Fl. Carniol. V.* 1. *p.* 12. *n.* 10. *OEder Fl. Dan. icon.* 492.

RADIX perennis, fibroſiſſima.

CAULES numeroſi, ad baſin repentes, dein erecti, ſimplices, palmares, teretes, læves.

FOLIA oppoſita, ſubconnata, ſubrotundo-ovata, *rariter et obſolete ſerrata, glabra,* trinervia.

FLORES albi, venis cæruleis picti, ſpicati, pedunculati, alterni, BRACTEÆ magnæ, ovatæ.

CALYX: PERIANTHIUM quadripartitum, laciniis ovato-acutis, glabris, *fig.* 1.

COROLLA monopetala, rotata; tubus breviſſimus; laciniæ ſubcordatæ, inferiore anguſtiore; ſuperiore laciniâ ſtriis aut venis purpureis octo notata, lateralibus venis duabus, inferiore penitus alba, *fig.* 2.

STAMINA: FILAMENTA duo, alba, apice incraſſata, *fig.* 5, 6. ANTHERÆ cæruleſcentes.

PISTILLUM: GERMEN ſubcompreſſum, STYLUS albus, apice paululum incraſſatus, perſiſtens. STIGMA capitatum, rubens, *fig.* 3.

NECTARIUM ad baſin germinis, ut in Veronica Chamædrys.

PERICARPIUM: CAPSULA ſubcordata, fuſca, pro magnitudine plantæ magna, *fig.* 4.

SEMINA plurima, 60 numeravi, e luteo fuſca, ſub-ovata, *fig.* 8.

ROOT perennial, and very fibrous.

STALKS numerous, creeping at bottom, then growing upright, ſimple, three or four inches high, round and ſmooth.

LEAVES oppoſite, nearly uniting at bottom, *of a roundiſh-oval form, here and there ſlightly ſerrated, ſmooth* and trinervous.

FLOWERS white, coloured with blue veins or ſtripes, growing in ſpikes on foot-ſtalks alternately. FLORAL LEAVES large and oval.

CALYX: a PERIANTHIUM divided into four parts, the ſegments of an oval-pointed ſhape, and ſmooth, *fig.* 1.

COROLLA monopetalous, wheel-ſhaped, the tube very ſhort, the ſegments ſomewhat heart-ſhaped, the lower one narroweſt; the upper ſegment marked with eight purple veins or ſtripes, the ſide ones with two, and the lower one entirely white, *fig.* 2.

STAMINA: two FILAMENTS, white and thickiſh towards the extremity; the ANTHERÆ blueiſh, *fig.* 5, 6.

PISTILLUM: the GERMEN flattiſh; the STYLE white, a little thicker towards the extremity, and continuing. STIGMA roundiſh, and of a rediſh colour, *fig.* 3.

NECTARY at the bottom of the germen as in the Veronica Chamædrys.

SEED-VESSEL: a CAPSULE ſomewhat heart-ſhaped, of a brown colour, and large in proportion to the plant, *fig.* 4.

SEEDS numerous, of a yellowiſh brown colour, and ſomewhat oval ſhape, *fig.* 8. We counted 60 in one capſule.

No particular virtues are attributed to this little plant by Writers.

It is one of the leaſt of the Veronicas, and occurs frequently in Meadows and Fields, and ſometimes in Gardens, flowering in the Spring and Autumnal Months.

There is a great deal of delicacy in its bloſſoms; but they are too minute to make its beauty conſpicuous enough for the Garden.

Its ſmall, round, ſmooth, and ſhining leaves readily diſtinguiſh it from the other Speedwells.



Veronica serpyllifolia.



Verbena Officinalis

VERBENA OFFICINALIS. VERVAIN.

VERBENA *Lin. Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.
Raii Gen. 14. SUFFRUTICES, ET HERBÆ VERTICILLATÆ.
VERBENA *officinalis*, tetrandra, ſpicis filiformibus, paniculatis; foliis multifido-laciniatis, caule ſolitario. *Lin. Syſt. Vegetab. p.* 62.
VERBENA foliis tripartitis rugoſis, ſpicis nudis graciliſſimis. *Haller. hiſt. v.* 1. *p.* 96.
VERBENA communis cæruleo flore. *Bauhin, Pin.* 269. mas, ſeu recta et vulgaris. *Parkinſon*, 674. communis *Gerard* 664. *Raii Syn.* 236. *Hudſon. Fl. Angl. p.* 505. *Scopoli. Fl. Carniol. p.* 433.

RADIX perennis, lignoſa, craſſitie digiti minimi, raro major, in terram profunde penetrans, fibroſa, luteſcens, ſapore ſubamaro.

CAULES plerumque plures ex eadem radice, erecti, pedales aut bipedales, quadrangulares, duo latera excavata, duo ſubconvexa, ſulcata, idque alterne, aculeis brevibus armati, brachiati.

FOLIA oppoſita, ſeſſilia, venoſa, profunde dentata, aut inciſa, ad baſin anguſtiora.

FLORES in ſpicas longas, filiformes, erectas diſpoſiti, BRACTEA ovato-lanceolata, acuminata, calyce breviore ſuffulti, *fig.* 11.

CALYX: PERIANTHIUM monophyllum, angulatum, quinquedentatum, *denticulo quinto minimo*, perſiſtens, *fig.* 1, 2, 3.

COROLLA monopetala, inæqualis, purpuraſcens, TUBUS cylindraceus, incurvatus; FAUX villoſa, *fig.* 5.; LIMBUS quinquefidus, *laciniis* rotundatis, ſubæqualibus, *fig.* 4.

STAMINA: FILAMENTA quatuor breviſſima, vix conſpicua, ANTHERÆ quatuor, quarum duæ breviores reliquis, ejuſdem formæ cum Didynamiis, *fig.* 6.

PISTILLUM: GERMEN tetragonum, STYLUS filiformis apice paululum incraſſatus; STIGMA obtuſum, *fig.* 7.

PERICARPIUM nullum, Calyx continens Semina.

SEMINA quatuor, oblonga, obtuſa, interne planiuſcula *alba*, externe fuſca, convexa, *ſulcato-reticulata*, *fig.* 8, 9, 10.

ROOT perennial, woody, about the thickneſs of the little finger, ſeldom larger, running deep into the earth, fibrous, of a yellowiſh colour, and ſlightly bitter taſte.

STALKS: in general ſeveral ariſe from the ſame root, upright, from one to two feet high, four ſquare, two ſides hollowed out, two roundiſh and grooved, and that alternately, armed with ſhort prickles, the branches alternately oppoſite.

LEAVES oppoſite, ſeſſile, veiny, deeply indented or cut in, narroweſt at bottom.

FLOWERS diſpoſed in long filiform erect ſpikes, ſupported by an oval-pointed FLORAL-LEAF ſhorter than the Calyx, *fig.* 11.

CALYX: a PERIANTHIUM of one leaf, quinquedentate, *the fifth tooth exceedingly minute*, continuing, *fig.* 1, 2, 3.

COROLLA monopetalous, unequal, purpliſh, the TUBE cylindrical and crooked, the MOUTH villous, *fig.* 5. the LIMB divided into five *ſegments*, which are round and nearly equal, *fig.* 4.

STAMINA: four FILAMENTS very ſhort and ſcarce conſpicuous, four ANTHERÆ, two of which are above the others, of the ſame form with thoſe of the claſs Didynamia in general, *fig.* 6.

PISTILLUM: the GERMEN four ſquare, the STYLE filiform, growing thicker towards the extremity, the STIGMA obtuſe, *fig.* 7.

PERICARPIUM wanting, the Calyx containing the Seeds.

SEEDS four, oblong, obtuſe, on the inſide flattiſh and *white*, on the outſide brown, convex, *grooved and reticulated*, *fig.* 8, 9, 10.

The Vervain may be conſidered as a kind of domeſtic plant, not confined to any particular ſoil, but growing by the road ſides, pretty univerſally at the entrance into Towns and Villages.

It produceth its bloſſoms in the months of Auguſt and September.

There is only one Species of this Genus which grows wild in this country, but in different parts of the world the ſpecies are numerous; and, what is remarkable, ſome have four and others but two Stamina; hence LINNÆUS ranks them among his *Diandrous* plants, making a diviſion of them into ſuch as have *flores Diandri* and *flores Tetrandri*. As our ſpecies hath four Stamina, two of which are above the other two, as the Style proceeds from the center of the four united Germina, and as four naked ſeeds follow, which are contained within the Calyx, we have placed it with SCOPOLI among the *Didynamia Gymnoſpermia* plants, a Claſs to which the botanic Student, who had been inſtructed in the Linnæan principles of Botany, would readily have been induced to refer it.

The ſeed of this plant has ſomething remarkably curious in its appearance; on the inſide it is of a ſnowy white, externally brown, and beautifully reticulated.

The Plant which the Romans called *Verbena*, appears to have been uſed on particular occaſions at a very early period, as a token of mutual confidence betwixt them and their Enemies. It was conſtantly applied to the purpoſes of Superſtition and Enchantment, in making wreaths and brooms for their Altars, and chaplets for their Prieſts. It is probable from *Pliny's* account, that the plant which we now deſcribe was the ſame with that of the Antients, but in a larger ſenſe: they called the Laurel and Myrtle, or whatever was bound round the Altar, *Verbena*. The dry harſh nature of this herb agrees but ill with the *Pinguis Verbena* of Virgil; perhaps it acquired that title from being anointed with the fat of the ſacrifice.

In later times Vervain has been accounted a ſovereign remedy in a multitude of diſorders; SCHRODER recommends it in upwards of thirty different complaints, on which Mr. Ray judiciouſly obſerves, "*Mirum tot viribus pollere plantam nulla inſigni qualitate ſenſibili dotatam!* Strange that a plant which inherits no remarkably ſenſible quality ſhould poſſeſs ſo many virtues!

Mr. Morley, a late writer on the Vervain, conſiders it as extremly uſeful in the cure of the Schrophula or King's evil, and, in his Eſſay on the nature and cure of Scrophulous diſeaſes, has given us a figure of the plant, with particular directions for its uſe, which conſiſts in hanging the root (which is to be of a larger or ſmaller ſize, according to the age of his Patients) tied with a yard of *white* ſattin ribband round the neck, there to be worn till they recover.

Thoſe who know any thing of the effects of Medicines on the human body, will not eaſily be perſwaded that ſuch a kind of application can produce any very wonderful effect in this caſe, even making the greateſt allowance for the powers of the imagination; and Mr. Morley, as if ſenſible of the inefficacy of his Vervain Amulet, calls to his aſſiſtance a number of powerful medicines, among others we find Mercury, Antimony, Hemlock, Jalap, &c.; and by a repeated and oft times a long continued application of Baths, Cataplaſms, Ointments, Poultices, Plaſters, &c. and the exhibition of gentle purges and alterative medicines, ſome have been relieved and others cured; but can any one hence infer, with any degree of reaſon, that the Vervain Root had any ſhare in the cure? Certainly no; out of all Mr. Morley's caſes there is not one which proves it, and the virtues of this plant ſtill remain to be aſcertained by rational experiments.

It ſhould be obſerved, that the Scrophula is a diſeaſe which, at certain periods of life, and at certain ſeaſons of the year, is liable to be much worſe than at others; and, frequently, exceeding bad caſes of this kind have been cured by the moſt ſimple applications.

Many people have applied no doubt to Mr. Morley, from a ſuppoſition that his motives were perfectly diſintereſted; and it muſt be confeſſed, that there are Empirics much more mercenary, and infinitely more dangerous; yet it does not appear but Mr. Morley acts nearly on the ſame principle with other Practitioners in Phyſick, with this difference indeed, that they receive their fees in ſpecie, he takes his in kind.

That we may not be thought to act diſingenuouſly by Mr. Morley, we ſhall quote his own words:—"Many, many Guineas have been offered me; but I never take any money. Sometimes indeed genteel People have ſent me ſmall acknowledgements of Tea, Wine, Veniſon, &c. Generous ones, ſmall pieces of Plate or other little Preſents. Even neighbouring Farmers a Gooſe or Turkey, &c. by way of Thanks."

POTENTILLA REPTANS. COMMON CINQUEFOIL OR FIVE LEAVED GRASS.

POTENTILLA *Linnæi Gen. Pl.* ICOSANDRIA POLYGYNIA:

Raii Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

POTENTILLA *reptans* foliis quinatis, caule repente, pedunculis unifloris. *Lin: Syſt. Vegetab. p.* 398. *Fl. Suecic. p.* 178.

FRAGARIA foliis quinatis ſerratis, petiolis unifloris, caule reptante. *Haller hiſt. v. 2. p.* 47.

QUINQUEFOLIUM majus repens. *Bauhin pin. p.* 325. *Gerard emac.* 987.

PENTAPHYLLUM vulgatiſſimum *Parkinſon* 398. *Raii Syn. p.* 255.

POTENTILLA *reptans. Hudſon. Fl. Angl. p.* 197. *Scopoli Fl. Carniol. p.* 361

RADIX perennis, fuſiformis, paucis fibrillis inſtructa, intra terram profunde penetrans, craſſitie digiti minimi aut pollicis etiam in annoſis, externe ſordide caſtanea.

CAULES numeroſi, teretes, glabri, repentes, purpurei.

FOLIA quinata, etiam ſeptena occurrunt, ſerrata, venoſa, inæqualia, parum hirſuta, petiolis longis inſidentia, per paria e geniculis caulium ad magna intervalla prodeuntia.

STIPULÆ geminæ, trifoliatæ, foliolis ovatis.

PETIOLI uniflori, longi, ſuberecti.

CALYX: PERIANTHIUM monophyllum, planiuſculum, decemfidum, laciniis alternis minoribus, ſæpe reflexis, *fig.* 3, 4, 5.

COROLLA: PETALA quinque, ſubrotundo-cordata, flava, unguibus calycí inſerta, *fig.* 6.

STAMINA: FILAMENTA viginti, ſubulata, Corolla breviora, margini interiori glanduloſæ calycis inſerta, in duas ſeries diſtributa; ANTHERÆ oblongæ, compreſſæ, flavæ, biloculares, loculæ membranâ diviſæ, inſidentes, *fig.* 7, 8.

PISTILLUM: GERMINA numeroſa, in capitulum collecta; STYLI filiformes filamentis breviores, lateri Germinis inſerti, perſiſtentes; STIGMATA minima, obtuſa, *fig.* 9, 10.

SEMINA numeroſa, parva, fuſca, ſtylo perſiſtente terminata, *fig.* 11, 12.

ROOT perennial, tapering, furniſhed with few fibres, penetrating deeply into the earth, the ſize of the little finger, or even of the thumb when old, externally of a dark cheſnut colour.

STALKS numerous, round, ſmooth, and creeping.

LEAVES quinate, or growing five together, ſometimes even ſeven, ſerrated, veiny, unequal in their ſize, ſlightly hairy, ſitting on long footſtalks, which proceed in pairs from the joints of the ſtalks at conſiderable diſtances.

STIPULÆ growing in pairs, compoſed of three oval-ſhaped leaves.

FOOT-STALKS of the flowers uniflorous, long, and nearly upright.

CALYX: a PERIANTHIUM of one leaf, flattiſh, divided into ten ſegments, the ſegments alternately ſmaller and frequently turned back, *fig.* 3. 4. 5.

COROLLA: five PETALS of a roundiſh heart-ſhaped figure, and yellow colour, inſerted into the Calyx by their Ungues or claws, *fig.* 6.

STAMINA twenty FILAMENTS tapering: ſhorter than the Corolla, inſerted into the inner edge of the Calyx, which puts on a glandular appearance, and placed in two rows; ANTHERÆ oblong, flat, bilocular, the bags or cavities divided by a membrane, ſitting on the filaments, *fig.* 7, 8.

PISTILLUM: the GERMINA numerous, collected into a little head; the STYLES filiform, ſhorter than the filaments, inſerted into the ſide of the Germen and continuing; the STIGMATA very ſmall and blunt, *fig.* 9, 10.

SEEDS numerous, ſmall, brown and terminated by the Style, *fig.* 11, 12.

The Roots of *Cinquefoil* and many other plants of the Claſs *Icoſandria*, poſſeſs conſiderable virtues as aſtringent medicines, and may be uſed in the ſame Caſes in which *Biſtort* is recommended.

It has likewiſe been uſed in ſome places for the purpoſe of tanning Leather where better materials for that purpoſe are with difficulty acquired.

A Tea or infuſion of the leaves is in uſe among the Country People as a drink in Fevers.

Moſt ſorts of Cattle are fond of the leaves, but it does not appear to be a plant worth cultivating on that account.

The Larva or Caterpillar of the *Phalæna Rubi*, *vid. Roeſel*, *Suppl. tab.* 69, *Albin tab.* 81, feeds on the leaves in Autumn, although a plant to which that Inſect is by no means confined.

It grows very common in meadows and on banks by the road ſides, and flowers in July, Auguſt, and September.

It affords the botanic Student a very good example of the *Caulis repens* or *Creeping Stalk.*



Potentilla reptans



Polygonum Persicaria.

POLYGONUM PERSICARIA. COMMON SPOTTED PERSICARIA.

POLYGONUM *Linnæi Gen. Pl.* OCTANDRIA TRIGYNIA.
Raii Syn. Gen. 5 HERBÆ FLORE IMPERFECTO SEU STAMINEO, VEL APETALO POTIUS.
POLYGONUM *Perſicaria* floribus hexandris ſemidigynis, pedunculis lævibus, ſtipulis ciliatis, ſpicis ovato-oblongis erectis.
POLYGONUM *Perſicaria* floribus hexandris digynis, ſpicis ovato-oblongis, foliis lanceolatis, ſtipulis ciliatis, *Lin. Syſt. Vegetab. p.* 312. *Flor. Suecic. p.* 130.
POLYGONUM foliis ovato-lanceolatis, ſubhirſutis, ſpicis ovatis, vaginis ciliatis. *Haller. hiſt. Helv. v.* 2. *p.* 257.
PERSICARIA mitis maculoſa et non maculoſa. *Bauhin. Pin. p.* 101.
PERSICARIA maculoſa *Gerard. emac.* 445. vulgaris mitis ſeu maculoſa. *Parkinſon.* 856. *Raii Syn. ed.* 3. *p.* 145. *n.* 4. Dead or ſpotted Arſmart. *Hudſon Flor. Angl. p.* 147. *n.* 4. *Scopoli Fl. Carniol p.* 279.

RADIX ſimplex, fibroſa.
CAULIS erectus, ad baſin aliquando repens, pedalis ad tripedalem, ramoſus, teres, glaber, ad geniculos ſenſim incraſſatus, ſæpe rubens: ſub geniculis puncta radicalia diſcernantur quamvis huic ſpeciei non propria.

RAMI alterni, e ſingulo geniculo prodeuntes, patentes, ſæpe diffuſi.
STIPULÆ vaginantes, liquore viſcido ſæpe repletæ, ciliatæ.
FOLIA lanceolata, ſubpetiolata, margine nervoque medio ſubhirſutis, utrinque lævia, maculâ ferrum equinum quodammodo referente ſæpius notata.

PEDUNCULI læves.
FLORES ſpicati, roſei, Spicæ terminales, erectæ, ſubovatæ.

CALYX: PERIANTHIUM quinquepartitum, coloratum, perſiſtens, ſegmentis ovatis obtuſis, *fig.* 1, 2.

COROLLA nulla.
STAMINA: FILAMENTA ſex fundo calycis inſerta longitudine corollæ ANTHERÆ rubentes, *fig.* 2.

PISTILLUM: GERMEN ovatum, compreſſum, aut triquetrum, *fig.* 3, 6. STYLUS *ad medium uſque bifidus ſæpe trifidus, fig.* 5, 8. STIGMATA duo aut tria ſubrotunda, *fig.* 4, 7.
SEMEN unicum, nitidum, aut ſubovatum, acuminatum, ad unum latus leviter convexum; *fig.* 9, 11, aut trigonum, *fig.* 10, 12.

ROOT ſimple and fibrous.
STALK upright, ſometimes creeping at bottom, from one to three feet high, branched, round, ſmooth, gradually thicker at the joints, often of a red colour: a little beneath each joint ſome radical points are obſervable, which however are not peculiar to this ſpecies.
BRANCHES alternate, proceeding from each joint, ſpreading, frequently very much ſo.
STIPULÆ embracing the ſtalk, frequently full of a viſcid liquid, and terminated by long ciliæ or hairs.
LEAVES lanceolate, with ſhort foot-ſtalks, the edge and midrib ſlightly hairy, ſmooth on both ſides, in general having a large ſpot on the middle of the leaf ſomewhat like a horſe ſhoe.
FOOT-STALKS of the flowers, ſmooth.
FLOWERS growing in ſpikes, of a bright roſe colour, the ſpikes terminal, upright, of a ſomewhat oval ſhape.
CALYX: a PERIANTHIUM divided into five ſegments, coloured, and perſiſting, the ſegments oval and obtuſe, *fig.* 1, 2.
COROLLA wanting.
STAMINA: ſix FILAMENTS inſerted into the bottom of the Calyx, the length of the Corolla; the ANTHERÆ reddiſh, *fig.*
PISTILLUM: GERMEN oval and flat, or three-ſquare, *fig.* 3, 6. STYLE *divided down to the middle into two, often into three parts, fig.* 5, 8. STIGMATA two or three, and round, *fig.* 4, 7.
SEED one, ſhining, either of an oval pointed ſhape and ſlightly convex on one ſide, *fig.* 9, 11. or three-ſquare, *fig.* 10, 12.

The very great ſimilarity which exiſts between the ſeveral ſpecies of the Polygonums, has occaſioned no ſmall degree of trouble to Botaniſts, in rightly aſcertaining the limits of each Species and Variety; a difficulty not to be overcome while Books are conſulted more than Nature. Senſible of the truth of this obſervation, and earneſtly deſirous of arriving at ſome certainty on this ſubject, we have examined a vaſt number of all the different Species and Varieties of Polygonum which our neighbourhood affords, compared them with one another, ſown the ſeeds, and cultivated many of them; and if we do not deceive ourſelves, have reduced ſome of the more difficult ones to their true Species and Varieties.

As what we relate concerning theſe plants is no more than the reſult of the moſt accurate and repeated inveſtigation, aſſiſted by the microſcope, we ſhall be the leſs concerned becauſe we differ from Authors of the moſt reſpectable Authority.

The writer who gives an account of all the known plants in the univerſe, cannot be ſuppoſed to have the opportunity of being ſo minute in his enquiries as one who deſcribes the plants of a particular ſpot, which as they grow are conſtantly the objects of his attention.

We have ventured to alter Linnæus's Specific deſcription of this plant, which ſtands thus.
Polygonum floribus hexandris digynis, ſpicis ovato-oblongis, foliis lanceolatis, ſtipulis ciliatis. to
Polygonum floribus hexandris ſemidigynis, pedunculis lævibus, ſtipulis ciliatis, ſpicis ovato-oblongis erectis.
We have not made this alteration from an idle deſire of differing from ſo great a Man, whom we truly reſpect and revere, but ſolely to make the diſtinctions betwixt thoſe plants more obvious, and thereby add our mite to the general ſtock of Botanic knowledge. In ſpecific deſcriptions, the diſtinguiſhing marks ſhould as much as poſſible be contraſted or oppoſed to each other, in theſe plants this does not ſeem to have been ſufficiently attended to. What we have principally in view by altering the Specific deſcription is to diſtinguiſh it from the *Polygonum Penſylvanicum* and its varieties, of which there are ſeveral, and to which the *Polygonum Perſicaria* in its general habit is exceeding nearly allied.

In all the flowers of this Species which we have examined, the Style has been divided juſt *half way down*, hence we have called the flowers *Semidigyni*, had it been divided down to the baſe they would with propriety have been called *Digyni*. In moſt of the flowers the Style is divided into two parts, and the Germen is a little convex on each ſide, in ſome of the flowers the ſtyle is divided into three, hence thoſe flowers might be called *Semitrigyni*, and when this is the caſe the Germen is always triangular. In the *Polygonum Penſylvanicum* the Style is divided *nearly to the baſe*, this difference then in the diviſion of the Style, is of conſiderable conſequence in diſtinguiſhing the two Species and their varieties from each other.

The footſtalks which ſupport the flowers in this Species, are quite ſmooth, in the *Polygonum Penſylvanicum*, they are beſet with a great number of minute glands, which gives them a manifeſt roughneſs, and contributes to characteriſe that Species.

The Stipulæ are furniſhed with long Ciliæ or Hairs, particularly towards the top of the plant, in the *Polygonum Penſylvanicum* theſe are wanting. Theſe two plants likewiſe differ much in the form of their ſeeds, of which we ſhall ſpeak more fully in our account of the latter.

The flowers always grow in upright ſpikes of an oval ſhape more or leſs round; by theſe two characters this Species is at once diſtinguiſhed from the *Polygonum Hydropiper*, the ſpikes of which are *filiform and pendulous*.

The leaves are moſt commonly ſpotted, but this is neither conſtant nor peculiar to this Species, and difference of ſize only forms the principle variety to which it is ſubject.

It grows exceedingly common in all our Ditches, and flowers in Auguſt and September; its bloſſoms are beautiful and laſt a conſiderable time, was it not ſo common, it would probably be thought worthy of a place in our Gardens.

No particular virtues or uſes are attributed to it.

BRYUM UNDULATUM. CURLED BRYUM.

BRYUM *Linnæi Gen. Pl.* CRYPTOGAMIA MUSCI.

Raii Syn. Gen. 3. MUSCI.

BRYUM *(undulatum)* antheris erectiuſculis, pedunculis ſubſolitariis, foliis lanceolatis carinatis undulatis patentibus ſerratis. *Linnæi Syſt. Vegetab. p.* 797.

BRYUM foliis lanceolatis ſerratis, capſulis cylindricis inclinatis ariſtatis. *Haller. Hiſt. tom.* 2. 1823.

BRYUM *phyllitidifolium*: ſurculo ſimplici, foliis undato-ſerrulatis, primordialibus plumuloſis. *Necker. Method. muſcor. p.* 203. cur nomen triviale a Cl. Neckero mutaretur non video, cum analogia unde nomen ejus ſumitur obſcura ſit, obſervante Cl. Scopoli.

BRYUM Phyllitidis folio rugoſo acuto, capſulis incurvis. *Dillen. muſc.* 360. *tab.* 46. *fig.* 18.

BRYUM undulatum. *Scopoli Fl. Carniol. n.* 1301. *Raii Syn. p.* 95. 16. *Hudſon. Fl. Angl.* 406. *Weis Cryptogam.* 196. *Oeder Fl. Dan. ta.* 497. noſtris duplo ſaltem minor, cum operculo nimis recto et acuto.

SURCULI unciales, aut biunciales, plerumque ſimplices, erecti, folioſi.

FOLIA lanceolata, undulata, carinata, *ſerrato-aculeata*, patentia, arefactione involuta, *fig.* 1.

PEDUNCULI ſimplices, (duo ex eodem ſurculo nonnunquam proveniunt) ſurculis plerumque longiores, erecti, rubri, *fig.* 2.

CAPSULA ſive ANTHERA cylindracea, incurvata, lente viſa ſubſtriata, primum viridis, dein ex livido-fuſca, demum rufa, *fig.* 3. Baſis OPERCULI hemiſphærica, rubra, apex pallida, ſetacea, obtuſiuſcula, *fig.* 5. Capſulæ ORA ciliata CILIIS inflexis, *fig.* 7.; ANNULUS ruber, *fig.* 6.; POLLEN ſeu SEMEN viride, *fig.* 8.

CALYPTRA pallide fuſca, acuminata, primum erecta, flexurâ capſulæ diſrumpitur, et recta manet, baſique ſuâ a Capſula ſecedit, *fig.* 4.

STALKS from one to two inches high, generally ſimple, upright, and leafy.

LEAVES lanceolate, waved, keel-ſhaped, *minutely and ſharply ſerrated at the edges*, ſpreading, when dry curling in, *fig.* 1.

FOOT-STALKS of the fructification ſimple, (ſometimes two proceed from the ſame ſtalk) generally longer than the ſtalks, upright, and of a reddiſh colour, *fig.* 2.

CAPSULE or ANTHERA cylindrical, incurvated, if magnified appearing ſomewhat ſtriated; firſt green, then livid-brown, and laſtly of a reddiſh brown colour; *fig.* 3. the bottom of the OPERCULUM hemiſpherical and red, the top paler, very ſlender and rather blunt; *fig.* 5. the MOUTH of the Capſule furniſhed with CILIÆ which bend inward, *fig.* 7.; the ANNULUS or RING red, *fig.* 6.; the POLLEN or SEED green, *fig.* 8.

CALYPTRA of a pale brown colour, and terminating in a long point, firſt upright, afterwards by the bending of the Capſule it becomes burſt at bottom, and remains ſtraight, with its baſe at ſome little diſtance from the Capſule.

This ſpecies of BRYUM is one of the largeſt we have in this Country. It produces its fructification from November to February, and may be found in moſt of the woods near Town, as well as on the heaths; but more particularly in Charlton Wood, where it abounds.

As all its parts of fructification are large and diſtinct, the botanic Student who would inveſtigate this difficult claſs of plants, cannot with this view ſelect any moſs more proper for his purpoſe.

Bryum Undulatum.



EUPHORBIA PEPLUS. SMALL GARDEN SPURGE.

EUPHORBIA *Linnæi Gen. Pl.* DODECANDRIA TRIGYNIA.
Raii Synop. Gen. 22. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.
EUPHORBIA *(Peplus)* umbella trifida, dichotoma, involucellis ovatis, foliis integerrimis obovatis petiolatis. *Linn. Syſt. Vegetab. p.* 375. *Fl. Suecic. p.* 163.
TITHYMALUS foliis rotundis, ſtipulis floralibus cordatis, obtuſis, petalis argute corniculatis. *Haller. Hiſt. vol.* 2. *p.* 9. *n.* 1049.
PEPLUS ſive Eſula rotunda. *Bauhin. Pin.* 292. *Parkinſon. Gerard. emac.* 503.
TITHYMALUS parvus annuus, foliis ſubrotundis non crenatis, Peplus dictus. *Raii Syn. p.* 313. *n.* 9. Petty Spurge. *Hudſon. Fl. Angl. p.* 182.

RADIX annua, lignoſa, ſimplex, fibroſa, albida.
CAULIS, ſuberectus, dodrantalis, teres, glaber, ramoſus, baſi durior, tenuior, ſubruber, folioſus, lactifluus.

RAMI pauci, ſparſi, inferioribus longioribus oppoſitis.

UMBELLA trifida, dichotoma.
FOLIA obovata, petiolata, integerrima, ſparſa, obtuſiuſcula, inferioribus ſubrotundis.

STIPULÆ *umbellæ* tres, ovato-acutæ, petiolis brevibus inſidentes, *umbellulæ* alterne oppoſitæ, ſeſſiles, cordato-ovatæ, inæquales, integerrimæ, baſi quâ tendit germen quaſi excavatæ.

CALYX ventricoſus, perſiſtens, *fig.* 1.
COROLLA nulla.
NECTARIA quatuor *bicorniculata*, *fig.* 2.
STAMINA plerumque duo, aut tria, viſibilia, exſerta: ANTHERÆ didymæ, ſubrotundæ, *fig.* 3.

PISTILLUM: GERMEN pedunculatum, nutans, triangulare, angulis longitudinaliter ſulcatis, *fig.* 4. 6.: STIGMATA tria, apice bifida, *fig.* 5.

PERICARPIUM: CAPSULA tricocca, trilocularis, trivalvis, valvulis lævibus, et dum adhuc virides diſſilientibus, *fig.* 6.

SEMEN unicum in ſingulo loculamento, ovatum, canum, *alveolatum*, appendiculatum, *fig.* 7.

N. B. Omnes partes fructificationis lente augentur.

ROOT annual, woody, ſimple, fibrous, and whitiſh.
STALK generally upright, about nine inches high, round, ſmooth, and branched; at bottom harder, more ſlender, and of a reddiſh colour, leafy and milky.
BRANCHES few, not growing in any regular order, the lower ones longeſt and oppoſite.
UMBEL firſt trifid, then dichotomous.
LEAVES ſomewhat oval, but narroweſt towards the baſe, having foot-ſtalks, entire at the edges, placed in no regular order, ſomewhat blunt, the lowermoſt leaves almoſt round.
STIPULÆ of the *large umbel* three in number, oval and pointed, placed on very ſhort foot-ſtalks: of the *ſmall umbel* alternately oppoſite, ſeſſile, of an heart-ſhaped-oval form, unequal, and entire, at bottom on that ſide to which the Germen tends as if cut away.
CALYX bellying out and continuing, *fig.* 1.
COROLLA wanting.
NECTARIES four, each having *two little horns*, *fig.* 2.
STAMINA ſeldom more than two or three, which are viſible, and placed without the Calyx: ANTHERÆ two on each filament joined together, of a roundiſh figure, *fig.* 3.
PISTILLUM: GERMEN placed on a foot-ſtalk, hanging down, triangular, the angles longitudinally grooved, *fig.* 4. 6.: STIGMATA three, bifid at top, *fig.* 5.
SEED-VESSEL: a CAPSULE of three cavities, and three valves, the valves protuberant, ſmooth, and ſplitting with a kind of elaſticity even while they are of a green colour, *fig.* 6.
SEED one in each cavity, oval, grey, with *numerous depreſſions on its ſurface*, and a little white button at one end, *fig.* 7.
N. B. All the parts of fructification are magnified.

MANY of the Spurges conſiderably reſemble one another, and two of them that have this affinity grow frequently together in Gardens, *viz.* the preſent Spurge, *Euphorbia Peplus*, and the Sun Spurge, *Euphorbia Helioſcopia:* they may be diſtinguiſhed, however, by the ſlighteſt attention. In the *Helioſcopia* the leaves are *notched* or *ſerrated* at the edges; in the *Peplus* they are entire. In the *Helioſcopia* the Petals, or rather Nectaria, are *round* and *entire*; in the *Peplus* each is furniſhed with *two little horns*, *fig.* 2. There are other marks of diſtinction; but theſe are the moſt ſtriking.

This ſpecies grows in Gardens and other cultivated ground, and flowers in Autumn.

The milky fluid, which it abounds with, is by ſome applied to Warts, which it is ſaid to deſtroy.

Moſt, if not all the plants of this Genus contain in them this milky and gummy ſubſtance, which to the taſte is exceedingly acrid; and this lactifluous property, joined to the peculiarity of its parts of fructification, point out almoſt at firſt ſight this natural family of plants. But the botanic Student, who would inveſtigate this ſpecies according to the principles of the Linnæan Syſtem, not having theſe characteriſtics to aſſiſt him, finds a conſiderable difficulty in learning even the *Claſs* to which it belongs, nor is it poſſible for him to aſcertain the Claſs by an examination of this or ſcarce any other Engliſh Spurge. The *Stamina*, in the firſt place, are very minute; it is ſeldom that more than *two* or *three* protrude beyond the Calyx, all the reſt lie concealed within it: They ſeldom amount to *twelve* in number; and even if they did amount to that exact number, their *minuteneſs*, and the *milky juice* which flows from the diſſection, render the enumeration of them ſearce practicable. The Student may, however, in a great degree ſurmount this difficulty, by an examination of ſome plant of this genus, which is larger in every reſpect; and the *Euphorbia Lathyris*, improperly called the *Caper Tree* (which is cultivated in many Gardens), will afford him a very good example, and tend to give him a clear idea of the flower and fruit of this ſingular genus of plants.

I would not be thought, on account of this difficulty, to inveigh againſt LINNÆUS's Syſtem, being ſenſible that difficulties occur, and muſt occur, in all botanic arrangements; and, inſtead of ſelecting faults inſeparable from every mode of claſſification (which ſeems to have been a favourite amuſement of ſome Authors, and forms indeed the greateſt part of their writings), I would uſe every endeavour to make it more perfect.

It is too much the faſhion now, as well as formerly, for every Botaniſt, as ſoon as he thinks he has ſome pretenſions to eminence, to ſet about the arduous taſk of framing a new Syſtem. He may by this means give the public ſome idea of his ſelf-conſequence, and be inrolled in the Catalogue of Syſtem-makers, but not one jot will he advance the ſcience of Botany. It is to be regretted, that Botaniſts will not be contented with a Syſtem, a proof of whoſe ſuperiority is the almoſt general reception it has met with throughout Europe, and unite in their endeavours to render that Syſtem more compleat, by giving us an accurate account of the hiſtory of thoſe plants not already given, their virtues and uſes. This appears to me to be the true method of advancing this delightful Science, and making it uſeful to Mankind.

When one Syſtem of Botany is generally followed, as is nearly the caſe at preſent, Botaniſts in different kingdoms perfectly underſtand each other's language; but, when each adopts a ſeparate one (which is frequently dictated by Pride or Caprice), all becomes Babel; and every one, who wiſhes to acquire a knowledge of the plants treated of, muſt, at conſiderable expence both of time and labour, acquire firſt the Author's new-created Syſtem-language, a tax which it is hoped every true Botaniſt will unite to oppoſe.



Euphorbia Peplus



Æthusa Cynapium.

ÆTHUSA *CYNAPIUM*. FOOL'S PARSLEY.

ÆTHUSA *Linnæi Gen. Pl.* PENTANDRIA DIGYNIA.
Raii Syn. Gen. 81. UMBELLIFERÆ HERBÆ.
ÆTHUSA *(Cynapium)* foliis conformibus. *Linnæi Syſt. Vegetab. p.* 236. *Fl. Suecic. p.* 92.
ÆTHUSA. *Haller. Hiſt. n.* 765.
CICUTA minor petroſelino ſimilis. *Bauhin. Pin. p.* 160.
CICUTARIA Apii folio. *I. Bauhin.*
CICUTARIA tenuifolia. *Gerard. emac.* 1063.
CICUTA minor ſive fatua. *Parkinſon.* 933. *Raii Syn. p.* 215. the leſſer Hemlock or Fool's Parſley. *Scopoli Fl. Carniol. p.* 206. *Hudſon Fl. Angl. p.* 107. *Hill's Britiſh Herbal*, ſmall Hemlock, *tab.* 58. *icon peſſima.*

RADIX *annua*, fuſiformis, alba, *minimi digiti craſſitudine*, paucis fibris inſtructa.

CAULIS pedalis ad bipedalem, erectus, ramoſus, ſtriatus, fiſtuloſus, glaucus, verſus baſin ſæpe purpureus, *non vero maculatus.*

FOLIA radicalia et ramea conformia, lævia, ſuperne *atro-virentia*, inferne pallidiora, nitentia, duplicato-pinnata, pinnis pinnatifidis, profunde inciſis, pinnulis ovato-acutis, mucronatis. *Vaginæ* ad baſin petiolorum parvæ, læves, marginibus membranaceis.

PETIOLI erecti, ſulcati.
UMBELLA *univerſalis* patens, radiis interioribus per gradus brevioribus, intimis breviſſimis; *partialis* univerſali ſimilis.
INVOLUCRUM *univerſale* nullum, *partiale* dimidiatum, extus poſitum, *foliolis tribus longiſſimis linearibus pendulis*, *fig.* 1.

COROLLA: PETALA quinque, alba, obcordata, inæqualia, apice inflexa, exteriora majora, *fig.* 2.
STAMINA: FILAMENTA quinque, alba, longitudine corollæ, inflexa: ANTHERÆ albæ, nonnunquam rubellæ, *fig.* 3.
PISTILLUM: GERMEN inferum, glandulâ vireſcente coronatum: STYLI duo, primum erecti, dein deflexi: STIGMATA obtuſa, *fig.* 4.

PERICARPIUM nullum: FRUCTUS ovato-ſubrotundus, ſtriatus, bipartibilis, *fig.* 5.

SEMINA duo, pallide fuſca, hinc convexa, profunde ſtriata, hinc plana, figurâ ovato-acutâ notata, *fig.* 6.

ROOT *annual*, tapering, of a white colour, *about the thickneſs of the little finger*, furniſhed with few fibres.
STALK from one to two feet high, upright, branched, ſtriated or ſlightly grooved, hollow, covered with a blueiſh kind of powder which eaſily wipes off, towards the bottom frequently of a purple colour, *but not ſpotted.*
LEAVES: the bottom leaves and thoſe of the branches ſimilar, ſmooth, on the upper ſide of a *dark green colour*, underneath paler and ſhining, twice pinnated, the leaves pinnatifid and deeply cut in, the ſmall leaves or pinnulæ oval and terminating in a fine point. The SHEATHS at the baſe of the foot ſtalks ſmall, ſmooth, and membranous at the edges.
FOOT-STALKS of the flowers, upright and grooved.
UMBEL: the *univerſal umbel* ſpreading, the inner radii gradually ſhorter, the inmoſt very ſhort; the partial umbel like the univerſal.
INVOLUCRUM: the *univerſal* INVOLUCRUM wanting, the *partial* one placed externally, and only ſurrounding one half of the umbel, compoſed of *three very long, linear, and pendulous leaves*, *fig.* 1.
COROLLA: five unequal, heart-ſhaped, white PETALS, bent in at top, the outer ones largeſt, *fig.* 2.
STAMINA: five white FILAMENTS the length of the Corolla, bending in: ANTHERÆ white, ſometimes reddiſh, *fig.* 3.
PISTILLUM: GERMEN placed below the corolla, and crowned by a glandular ſubſtance of a greeniſh colour: two STYLES firſt upright, afterwards bending downward: STIGMATA blunt, *fig.* 4.
SEED-VESSEL wanting: the FRUIT or unripe ſeed of an oval roundiſh ſhape, ſtriated, and dividing into two parts, *fig.* 5.
SEEDS two, of a pale brown colour, convex and deeply ſtriated on one ſide, flat on the other, and marked with a figure of an oval-pointed ſhape, *fig.* 6.

ONE of the principal advantages reſulting to mankind from Botany, is the rightly aſcertaining thoſe plants which are uſed for food from thoſe which are known to be poiſonous. It not unfrequently happens, that both theſe kinds of Herbs grow in the ſame ſoil; nay, often in the ſame bed together; and ſo ſimilar are they in their general appearance, that the indiſcriminating eye of the common obſerver readily miſtakes the one for the other, and hence diſeaſes fatal in their conſequences ſometimes enſue. To point out then the moſt obvious diſtinctions between ſuch kinds of plants, is not only our buſineſs but our duty.

The *Fool's Parſley* ſeems generally allowed to be a plant which poſſeſſes poiſonous qualities.

Baron HALLER has taken a great deal of pains to collect what has been ſaid concerning it, and quotes many authorities to ſhew that this plant (on being eaten) has been productive of the moſt violent ſymptoms, ſuch as anxiety, hickcough, and a delirium even for the ſpace of three months, ſtupor, vomiting, convulſions, and death: He ſuſpects, however, that the common Hemlock may ſometimes have had a ſhare in producing theſe ſymptoms, as he finds in Authors, that the Fool's Parſley had been uſed by a whole family without any bad effect, although he imagines this might be owing to the ſmallneſs of the quantity eaten. As a corroborating proof of its deleterious quality, LINNÆUS aſſerts, that it proves fatal to geeſe if they happen to eat it.

Although it ſeems rather doubtful, whether it be ſo poiſonous to mankind as is repreſented, yet it will perhaps be moſt prudent to conſider it as ſuch, until future experiments ſhall determine its effects with more certainty.

The plants to which this bears the greateſt reſemblance are *common Garden Parſley* and *common Hemlock*, *Conium maculatum.* This ſimilarity has been obſerved by moſt Botanic Writers; ſome of whom have called it a kind of Hemlock, others a kind of Parſley. It differs however conſiderably from both theſe Genera. The colour of its leaves alone is nearly ſufficient to diſtinguiſh it from Parſley; thoſe of common Parſley are of a *yellowiſh green colour*, thoſe of Fool's Parſley of a *very dark green*, and much more finely divided; the leaves of Parſley when bruiſed have *a ſtrong but not diſagreeable ſmell*, thoſe of Fool's Parſley have *very little ſmell* in them. Theſe marks, if attended to, are ſufficient to diſtinguiſh the *leaves* of theſe two plants, and in the ſtate of leaves they are moſt liable to be taken for one another, as they grow together in Gardens. Where much Parſley is uſed, the Miſtreſs of the houſe therefore would do well to examine the Herbs previous to their being made uſe of; but the beſt precaution will be always to ſow that variety called Curled Parſley, which cannot be miſtaken for this or any other plant.

It is diſtinguiſhed from *Hemlock* by being in every reſpect ſmaller, and not having that ſtrong diſagreeable ſmell which characteriſes the leaves of that plant; the ſtalk likewiſe is not ſpotted as in Hemlock; and, laſtly, it is diſtinguiſhed from *all our umbelliferous* plants by the *three long*, *narrow*, *pendulous leaves*, which compoſe its partial *Involucrum*, and which are placed at the bottom of each of the ſmall Umbels.

It grows very common in Gardens, and all kinds of cultivated ground, and *flowers* in July and Auguſt.

CONVOLVULUS SEPIUM. LARGE WHITE CONVOLVULUS, or GREAT BINDWEED.

CONVOLVULUS *Linnæi Gen. Pl.* PENTANDRIA MONOGYNIA.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

CONVOLVULUS *(ſepium)* foliis ſagittatis, poſtice truncatis, pedunculis tetragonis, unifloris. *Linn. Syſt. Vegetab. p.* 168. *Fl. Suecic. p.* 64.

CONVOLVULUS foliis ſagittatis, hamis emarginatis, anguloſis, petiolis unifloris, ſtipulis cordatis maximis. *Haller. Hiſt. v.* 1. *p.* 294.

CONVOLVULUS Major albus. *Bauhin. Pin.* 294.

SMILAX lævis major. *Gerard. Emac.* 861. *Parkinſon.* 163. *Raii Syn. p.* 275. Great Bindweed. *Hudſon. Fl. Angl. p.* 74. *Scopoli Fl. Carniol.* 141. *Fl. Dan. icon.* 458.

RADIX perennis, craſſitie pennæ anſerinæ, alba, ſub terra reptans et late ſe propagans, vix eradicanda, Hortorum peſtis.

CAULES numeroſi, volubiles, tortuoſi, ſtriati, orgyales, ſubramoſi.

RAMI pauci, alterni, cauli ſimiles.

FOLIA alterna, ſagittata, poſtice truncata, glabra, petiolata.

PEDUNCULI uniflori, alterni, tetragoni.

CALYX INVOLUCRUM biphyllum, foliolis oblongo-cordatis, ſubcarinatis, venoſis, purpuraſcentibus, *fig.* 1.

CALYX PERIANTHIUM pentaphyllum, tubuloſum, foliolis ovato-lanceolatis, pallide virentibus, *fig.* 1.

COROLLA monopetala, infundibuliformis, lactea, limbo lato, obſcure diviſo, paululum reflexo.

STAMINA: FILAMENTA quinque, fundo corollæ inſerta, hirſutula, alba, ſubulata; ANTHERÆ ſagittatæ, albæ, inſidentes, *fig.* 3.

PISTILLUM: GERMEN ſubovatum; STYLUS ſubulatus apice tortuoſus; STIGMA bifidum, *fig.* 4, 5.

NECTARIUM: Glandula crocea annuliformis ad baſin Germinis.

PERICARPIUM: CAPSULA ſubrotunda, fuliginoſa, mucronata, *fig.* 6, 7.

SEMINA anguloſa, fuſca, Cotyledonibus mire convolutis, *fig.* 8, 9.

ROOT perennial, about the thickneſs of a gooſe-quill, of a white colour, creeping under the ground and propagating itſelf exceedingly, rooted out with the greateſt difficulty, and hence very troubleſome in Gardens.

STALKS numerous, twining, twiſted, ſtriated, generally about ſix feet high, and ſomewhat branched.

BRANCHES few, alternate, like the Stalk.

LEAVES alternate, arrow-ſhaped, apparently cut off behind, ſmooth, and placed on foot-ſtalks.

FOOT-STALKS of the flowers, alternate, ſupporting one flower only, and four-ſquare.

CALYX an INVOLUCRUM compoſed of two heart-ſhaped leaves, ſlightly keel-ſhaped, veiny, and purpliſh, *fig.* 2.

CALYX a PERIANTHIUM, compoſed of five leaves and tubular, the leaves of an oval pointed ſhape and pale green colour, *fig.* 1.

COROLLA monopetalous, funnel-ſhaped, of a white colour, the limb broad, obſcurely divided, and turned back a little.

STAMINA: five FILAMENTS inſerted into the bottom of the corolla, ſlightly hairy, white and tapering; the ANTHERÆ arrow-ſhaped, white, and ſitting on the filaments, *fig.* 3.

PISTILLUM: GERMEN ſomewhat oval; STYLE tapering, twiſted at top; the STIGMA bifid, *fig.* 4, 5.

NECTARY a yellow gland ſurrounding the baſe of the Germen.

SEED-VESSEL a roundiſh CAPSULE of a ſooty colour and pointed, *fig.* 6, 7.

SEEDS angular and brown, the Cotyledons folded up in a very ſingular manner, *fig.* 8, 9.

The plant which produces the *Scammony* is a ſpecies of Convolvulus, very ſimilar to that which we have now deſcribed; hence Dr. Cullen, and ſome other Phyſicians, have conjectured, that our Convolvulus might poſſeſs ſimilar properties; but, if it ſhould be found to contain ſuch properties, the ſmallneſs of its roots would prevent its juice from being collected in the ſame manner with that which flows on inciſion from the large root of the Scammony plant, and which hardens and forms that purgative ſubſtance. Whether an extract made from the expreſſed juice of the roots, or any other preparation of them, might poſſeſs a purgative property; or, if it ſhould, whether ſuch a purgative would be ſo far ſuperior to any now in general uſe as to introduce it deſervedly into practice; is what we cannot pretend to decide on. Hogs are ſaid to eat, and even to be fond of, the roots.

It grows exceedingly common in our hedges, and flowers in Auguſt and September. Where it has once gained ground, it is with the greateſt difficulty eradicated: was it not for this property, and its being ſo common, it would doubtleſs be conſidered, as it really is, a very ornamental plant.

My ingenious Friend Mr. CHURCH, Surgeon, at Iſlington (who has taken much pains to collect and acquire a knowledge of our Engliſh Inſects), informs me, that the Caterpillar of the *Phalæna Vibicaria*, or *Bloody-vein Moth (vid. Clerc. Phalæn. pl.* 3. *fig.* 2.), feeds on this plant; and the *Sphinx Convolvuli*, or *Unicorn Hawk Moth (vid. Roeſel. Cl.* 1. *pap. noct. t.* 7.), is well known to take its name from feeding on this plant alſo.



Convolvulus Sepium.



Viola tricolor.

VIOLA TRICOLOR. WILD PANSIE.

VIOLA *Linnæi Gen. Pl.* SYNGENESIA MONOGAMIA.
Raii Synop. Gen. 20. HERBÆ PENTAPETALÆ VASCULIFERÆ.
VIOLA tricolor, caule triquetro diffuſo, foliis oblongis inciſis, ſtipulis pinnatifidis. *Linn. Syſt. Vegetab. p.* 668. *Fl. Suecic.* 307.
VIOLA caule diffuſo, ramoſo, foliis ovatis dentatis, flore calyce paulo majori. *Haller. Hiſt. tom.* 1. *n.* 569.
VIOLA bicolor arvenſis. *C. Bauhin. Pin.* 200.
VIOLA tricolor ſylveſtris. *Parkinſon.* 755.
JACEA bicolor frugum et hortorum vitium *I. Bauhin.* III. 548. *Raii Syn. p.* 336. 11. *Hudſon. Fl. Angl. p.* 331. *Scopoli Fl. Carniol. p.* 183.

RADIX ſimplex, fibroſa.
CAULIS palmaris et ultra, plerumque diffuſus, ramoſus, anguloſus, ad baſin ſordide purpureus; rami alterni.
FOLIA longe petiolata, elliptica, crenata, inferioribus ſæpe minoribus, ſubrotundis, ſuperioribns anguſtis, ſubdentatis.
STIPULÆ ad baſin laciniato-pinnatifidæ, laciniis linearibus, extrema oblonga, dentata.

PEDUNCULI ſubquadrangulares, alterni, apice incurvati, dorſo canaliculati, ſtipulis duobus parvis, membranaceis, prope florem, inſtructi.

CALYX: PERIANTHIUM pentaphyllum, perſiſtens foliolis acutis, tria *ſuperiora* minora, ad baſin æqualia, ſuprema erecta, petalis ſupremis longiora, duo *inferiora* apice et baſi cæteris longiora, baſique latiora, petalis infimis breviora, *fig.* 2.

COROLLA pentapetala, irregularis, duo ſuperiora ſubrotunda, integerrima, albida, deorſum ſpectantia; lateralium *lamina* ovata, obtuſa, ad baſin barbata, lineaque brevi purpurea notata; infimum latum emarginatum, ad baſin flavum, lineis quinque purpureis pictum, CALCARE SEU NECTARIO.
NECTARIUM. terminatum, longitudine calycis, apice violaceo, obtuſo, *fig.* 3, 4, 5, 6.

STAMINA: FILAMENTA quinque, breviſſima; ANTHERÆ albidæ, vix coadunatæ, biloculares, membranâ croceâ terminatæ, e duobus inferioribus exeunt, nectariumque intrant, appendiculæ duæ lineares, *fig.* 7, 8, 9, 10.
PISTILLUM: GERMEN ſubconicum, *fig.* 11.; STYLUS ad baſin tortuoſus, ſtaminibus longior, *fig.* 12.; STIGMA capitatum, oblique perforatum, perſiſtens, *fig.* 13.
PERICARPIUM: CAPSULA ovata, glabra, unilocularis, trivalvis, *fig.* 14, 15.
SEMINA plurima, ovata, fuſca, nitida, appendiculata, valvis ſeriatim affixa, *fig.* 15.

ROOT ſimple and fibrous.
STALK about four or ſix inches high, generally ſpreading, branched, angular, at bottom of a dull purple colour; the branches alternate.
LEAVES placed on long foot-ſtalk, elliptical, crenated, the lowermoſt often ſmaller and roundiſh, the uppermoſt narrow and ſlightly indented.
STIPULÆ at bottom jagged and pinnatifid, the laciniæ or jags linear, that which terminates the Stipula oblong and indented.
FOOT-STALKS of the flowers, nearly quadrangular, alternate, bent in at top, channeled on the back, and furniſhed with two ſmall membranous Stipulæ near the flower.
CALYX: a PERIANTHIUM of five leaves and continuing, the leaves ſharply pointed, the three *upper ones* ſmalleſt, and equal at bottom, the uppermoſt upright and longer than the uppermoſt petals, the two *under leaves* longer both at bottom and top than the reſt, and at bottom likewiſe broader, ſhorter than the lowermoſt petals, *fig.* 2.
COROLLA pentapetalous and irregular, the two uppermoſt petals roundiſh, entire, and reflected; the lamina or broad part of the ſide petals oval, obtuſe, bearded at bottom, and marked with a ſhort purple line; the lowermoſt petal broad, emarginate, yellow at bottom, and ſtreaked with five purple lines, and terminated by a NECTARY. SPUR or NECTARY the length of the Calyx, with a blueiſh and blunt point, *fig.* 3, 4, 5, 6.
STAMINA: five FILAMENTS very ſhort; ANTHERÆ whitiſh, ſcarcely united, bilocular, terminated by a ſaffron coloured membrane; from the two lowermoſt two linear appendages go off and enter the nectary, *fig.* 7, 8, 9, 10.
PISTILLUM: GERMEN ſomewhat conical, *fig.* 11.; STYLE twiſted at bottom and longer than the Stamina, *fig.* 12.; STIGMA forming a little head, obliquely perforated and continuing, *fig.* 13.
SEED-VESSEL: an oval ſmooth CAPSULE of one cavity and three valves, *fig.* 14, 15.
SEEDS numerous, oval, brown and ſhining, with a button to each, affixed in rows to the inſide of the valves, *fig.* 15.

Few plants have acquired a greater variety of names than the *Viola Tricolor*. In different Authors, and different counties, we find the following, *viz. Wild Panſie, Herb Trinity, Hearts-eaſe, Three faces under a hood, Cull me to you, Love in Idleneſs*, &c. What has occaſioned ſome of theſe is the different appearance it puts on from cultivation and change of ſoil. In a garden there are few flowers that can boaſt a greater variety or richneſs of colour, few that continue longer in bloſſom, or are cultivated with more eaſe. It is probable, that the large yellow Violet, *Viola lutea*, is no more than a variety of this ſpecies.

The Panſie in its wild ſtate occurs very frequently in cultivated fields, and bloſſoms through moſt of the ſummer months. It is ſo hardy as to appear in Lapland amongſt the few other plants which ornament the waſtes of that Country during its ſhort ſummer. It is eaten by Kine and Goats.

The difference in the form of the Stigma ſeems to divide the plants of this Genus into two families, *viz. Panſies* and *Violets*. In the former the Stigma is round, with a remarkable hole on one ſide of it: in the latter it is hooked.

Linnæus remarks the black lines which ſometimes appear on the Petals. MILTON had obſerved the ſame, "*Panſies freakt with Jet.*" In a poor ſoil the purple and yellow in the bloom of this flower frequently become very faint, and ſometimes fade into a perfect white. This variation in colour gives a propriety to the Metamorphoſis of this flower, in which SHAKESPEARE pays an elegant compliment to his royal Miſtreſs.

That very time I ſaw (but thou could'ſt not)
Flying between the cold Moon and the Earth,
Cupid *all-arm'd: a certain aim he took*
At a fair Veſtal, throned by the weſt,
And loos'd his love-ſhaft ſmartly from his bow,
As it ſhould pierce a hundred thouſand hearts:
But I might ſee young Cupid's *fiery ſhaft*
Quench'd in the chaſte beams of the watery moon,
And the imperial votreſs paſſed on,
In maiden meditation fancy-free.
Yet mark'd I where the bolt of Cupid *fell;*
It fell upon a little weſtern flower,
Before milk-white; now purple with Love's wound,
And Maidens call it Love in Idleneſs.

FESTUCA FLUITANS. FLOTE FESCUE GRASS.

FESTUCA *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA.

Raii Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

FESTUCA panicula ramoſa erecta, ſpiculis ſubſeſſilibus, teretibus muticis. *Linnæi Syſt. Vegetab. p.* 102. *Fl. Suecic. p.* 32.

POA locuſtis teretibus multifloris, glumis floralibus exterioribus truncatis, interioribus bifidis. *Haller. Hiſt. p.* 219. *n.* 1453. *v.* 2.

POA fluitans. *Scopoli Fl. Carniol. p.* 73.

GRAMEN aquaticum fluitans, multiplici ſpica. *Bauhin. Pin.* 2.

GRAMEN aquaticum cum longiſſima panicula. *I. Bauhin.* II. 490. *Raii Syn. p.* 412. Flote-Graſs.

GRAMEN fluviatile. *Gerard. emac.* 14. *Parkinſon.* 1275. *Hudſon. Fl. Angl. p.* 38. *Oeder. Fl. Dan. t.* 237. *Schreber. Gram. tab.* 3. *Stillingfleet. miſ. tab.* 10.

RADIX perennis, in limum profunde penetrans.

CULMUS pro ratione loci pedalis ad tripedalem, baſi repens ſurculoſque promens, dein ſuberectus, vaginis foliorum ad paniculam uſque amictus.

VAGINÆ foliorum compreſſæ, ſubancipites, ſtriatæ.

FOLIA latiuſcula, lævia; *ſurculorum* erecta, carinata, breviuſcula, *caulina* longiora, planiuſcula, flaccida, aquis tempore hyberno proſtrata.

PANICULA longa, inclinata, nonnunquam ſubſpicata ſæpius vero ramoſa, ramis nunc cauli adpreſſis nunc diſtantibus, ut pinxit Cl. Schreberus.

SPICULÆ tenues, teretes, unciales aut ſeſquicunciales 9 ad 12 floræ, rachi adpreſſæ.

CALYX: GLUMA bivalvis, valvulis inæqualibus, membranaceis, *fig.* 2.

COROLLA bivalvis, valvulæ longitudine æquales, calyce majores, *inferiore* majore, concava, lineata, nervis apice ſæpe coloratis, apice membranacea, obtuſiuſcula, ſæpius eroſa; *ſuperiori* lanceolata, compreſſa, bicuſpidata, *fig.* 3, 4.

STAMINA: FILAMENTA tria capillaria, ANTHERÆ flavæ aut purpuraſcentes, oblongæ, *fig.* 5.

PISTILLUM: GERMEN ovatum, STYLI duo ſubulati, reflexi, STIGMATA ramoſiſſima, *fig.* 7. 6. 8.

NECTARIUM Glandula ſquamiformis, cordata, horizontalis, ad baſin germinis, *fig.* 9.

SEMEN oblongum, nitidum olivaceum, bicorniculatum, nudum, *fig.* 10, 11.

FIG. 12. Spicula morbo *Ergot* affecta.

ROOT perennial, ſtriking deep into the mud.

STALK according to its place of growth from one to three feet in length, creeping at bottom and ſending forth young ſhoots, afterwards nearly upright; covered with the ſheaths of the leaves as far as the panicle.

SHEATHS of the leaves, flattened, two-edged, and ſtriated.

LEAVES rather broad and ſmooth, thoſe of the young ſhoots upright, keel-ſhaped, and ſhortiſh; thoſe of the ſtalk longer, flattiſh, weak, and hanging down, in the winter ſeaſon lying flat on the water.

PANICLE long, generally inclined or bending down a little, ſometimes forming a kind of ſpike, but moſt commonly branched; the branches ſometimes preſſed to the ſtalk, ſometimes diverging from it in the manner repreſented by Schreber.

SPICULÆ ſlender, round, an inch or an inch and a half long, producing from 9 to 12 flowers, preſſed to the ſtalk.

CALYX: a GLUME of two valves, which are unequal and membranous, *fig.* 2.

COROLLA of two valves, which are of an equal length and bigger than the calyx, the *lower valve* largeſt, concave, and nervous, the nerves towards the top frequently coloured, at top membranous, rather blunt with uneven points, the upper valve more pointed, flat, and bifid, *fig.* 3, 4.

STAMINA: three FILAMENTS very ſlender, ANTHERÆ oblong and yellow or purpliſh, *fig.* 5.

PISTILLUM: GERMEN oval, STYLES two, tapering and bending back, STIGMATA very much branched, *fig.* 7. 6. 8.

NECTARY a ſmall heart-ſhaped ſquamiform gland, placed horizontally at the bottom of the germen, *fig.* 9.

SEED oblong, ſhining, of an olive colour, with two little horns, and naked, *fig.* 10, 11.

FIG. 12. a ſpicula affected with the diſeaſe called *Ergot*.

In ſpeaking of the *Bromus mollis*, we had occaſion to remark the great variety of appearance to which the Graſſes were ſubject from ſoil and ſituation, and this obſervation is equally applicable to the *Feſtuca fluitans*.

This Graſs appears to thrive beſt in ſtill waters, or gently running ſtreams, where its numerous fibres penetrate eaſily into the mud: in ſuch ſituations it becomes very luxuriant. The leaves are large, tender, and ſweet, and the Panicle becomes very much branched; but in Meadows, where it is deprived of its natural quantity of water, it becomes in every reſpect leſs, and the Panicle is frequently changed to a ſimple ſpike. When it has nearly done flowering, the branches of the Panicle generally project from the main ſtalk, ſo as to form an acute angle. In every ſituation, whether the Panicle be large or ſmall, the Spiculæ are always preſſed cloſe to the ſtalk or branches of the Panicle; and this circumſtance, joined to the length and roundneſs of the Spiculæ, ſufficiently characteriſe this ſpecies: if it ſhould not, however, its parts of fructification afford at once a moſt pleaſing and ſatisfactory diſtinction, *vid. fig.* 6. 9, 10.

We



Festuca fluitans.



We have often had the ſingular pleaſure of obſerving this Graſs, ſoon after being gathered, expand its Glumes, and expoſe its delicate yellow ſtamina, and ſtill more delicate Piſtilla; and in this expanded ſtate each Spicula puts on a very different face, and ſeems to invite the Student to its inveſtigation; and would he wiſh to become acquainted with the ſtructure of this uſeful tribe of plants, he cannot ſelect one more proper for his purpoſe, as it may be found in almoſt every watery ditch, flowering from the beginning to the end of Summer, and has all the parts of fructification which are peculiar to the Graſſes, large enough to be diſtinctly diſcerned even by the naked Eye, and ſo expoſed as to be viſible without the trouble of diſſection.

Modern Botaniſts ſeem much divided whether they ſhould conſider this as a *Poa* or *Feſtuca*. As it does not appear to us that we ſhould in the leaſt advance our favourite Science by altering its generic name, we have continued that of LINNÆUS, although we are by no means ſatisfied with his generic characters of the Graſſes in general, and are perſuaded, that future obſervations, and a more accurate attention to the minute parts of their fructification, will place thoſe Genera in a much clearer point of view than has yet been done by any author.

Profeſſor OEDER, in his FLORA DANICA, and the celebrated SCHREBER, in his AGROSTOGRAPHIA, have both given a figure of this Graſs. As we have not ſeen it growing either in Denmark or Germany, we cannot ſay that their figures do not expreſs its particular mode of growth in thoſe countries; but they do not convey to us its habit or manner of growing here. In both their figures the Panicle is repreſented quite upright; whereas with us it is always more or leſs inclined. This, however, is a matter of no great moment; a deviation from nature in the repreſentation of the minute parts of the fructification is a matter of much greater conſequence, and we are ſorry to find that Mr. SCHREBER, whoſe knowledge and accuracy can ſeldom be called in queſtion, has not been ſufficiently attentive to all the parts which characteriſe this ſpecies. He has repreſented the Styles as branched or feathered quite down to the Germen; whereas they are evidently *naked at bottom* and *much branched at top only*. The ſingular Squamula or Scale at the baſe of the Germen he has properly noticed; but the *two little horns* at the top of the ſeed, which are the remains of the Styles, and which in a peculiar manner diſtinguiſh this important ſeed, he does not remark. In the *Flora Danica* the Styles are likewiſe feathered down to the Germen, and the Squamula at the baſe of the Germen wholly omitted.

This Graſs is found to be of conſiderable importance in the œconomy of Nature.

The *Phalenæ Feſtucæ*, or *Gold Spot Moth*, to which LINNÆUS, with great propriety, adds the epithet of *pulcherrima*, (*vid. Fauna Suecica; p.* 311. *Albin. pl.* 84. *lit.* E. F. G. H.) is ſaid by him to feed on this particular Species; with us, however, it is always found on a different Graſs, *viz.* the *Poa aquatica*, or *large water Poa*. Its hiſtory, with the particular manner of finding it, we ſhall give under that Graſs.

From the obſervations of late writers it appears, that ſeveral ſorts of Cattle are remarkably fond of this Graſs, particularly Kine and Hogs; and that in the ſpring time they are frequently enticed into bogs, by endeavouring to get at its ſweet young ſhoots, which appear earlier than thoſe of moſt other Graſſes.

" Profeſſor KALM, in a journey through part of *Sweden*, obſerved the Swine to go a great way into the water after " this graſs, the leaves of which they eat with great eagerneſs. On this he was tempted to try if they would eat the " ſame graſs dried: he accordingly had ſmall bundles of it gathered, dried, and caſt before them; the conſequence " was, they ate it ſeemingly with as much appetite as horſes do hay; hence he concludes that, by cultivating this " graſs, *wet and ſwampy places* might be rendered uſeful, and a great deal of corn, &c. ſaved."

He who introduced the method of feeding hogs in ſummer time on Clover, deſerved very well of his country; and if the hay of this graſs would keep them in heart during the winter, it might prove a very valuable diſcovery.

Mr. Kent, in his *Hints to Gentlemen of Landed Property*, lately publiſhed, conſiders this as a moſt valuable graſs, and aſſures us (*p.* 34.) it is to be improved above all others, and at a leſs expence, merely by flooding. (*P.* 54.) he informs us, that flooding deſtroys *all weeds*, and enriches the lands to a very high degree. (*P.* 56.) he ſays, as rolling and preſſure *bring* the *annual meadow-graſs*, ſo flooding immediately *begets* the *flote feſcue*. Theſe aſſertions of Mr. Kent beſpeak neither the Philoſopher nor the accurately practical Farmer; they contain an exaggerated account of improving paſture land by a particular proceſs, but ſhew a great want of that minute attention which ſo important a ſubject required,

From a long reſidence in Hampſhire, we well know, that the meadows in that county are conſiderably improved by flooding them, that is, ſtopping the water when there happens to be an unuſual quantity, from violent or long continued rains, and by means of trenches or gripes, conveying the ſurplus water ſo as to overflow them entirely, if poſſible; but we deny that by this proceſs *all weeds* are deſtroyed, the uſe of *manure* ſuperſeded, or that *flote feſcue graſs* is immediately *begotten*. Although it is a conſtant practice with the farmers to flood their meadows in the winter, it is no leſs a conſtant practice, with ſuch as wiſh to have good crops of Graſs, to manure them with dung or aſhes. Flooding can no otherways deſtroy weeds than by altering the ſoil in which they grow; and if it deſtroys one ſet of weeds, it muſt certainly favour the growth of another. If thoſe plants which throve beſt in a dry ſituation are deſtroyed by the alteration which now takes place in the ſoil, thoſe which are fond of a moiſt ſituation will proportionably flouriſh. If the *flote feſcue graſs* was immediately produced by flooding, we ſhould find all thoſe meadows which have undergone this operation to contain nothing but this kind of graſs, whereas the richeſt and beſt meadows in Hampſhire contain ſcarce a ſingle blade of it. The fact is, this graſs will not flouriſh in meadow land, unleſs you convert it into a kind of bog or ſwamp; and, I believe, few landed Gentlemen will think this an improvement, or thank Mr. Kent for giving them ſuch an hint.

" Mr. Stillingfleet informs us, that Mr. Deane, a very ſenſible Farmer at Ruſcomb, in Berkſhire, aſſured him, that " a field always lying under water, of about four acres, that was occupied by his father when he was a boy, was covered " with a kind of graſs that maintained five farm-horſes in good heart from April to the end of harveſt without giving " them any other food; and that it yielded more than they could eat. He, at my deſire, brought me ſome of the " graſs, which proved to be the *flote feſcue* with a mixture of *marſh bent*. Whether this laſt contributes much towards " furniſhing ſo good paſture for horſes, I cannot ſay: they both throw out roots at the joints of the ſtalks, and there- " fore likely to grow to a great length. In the index of dubious plants, at the end of *Ray's Synopſis*, there is men- " tion made of graſs, under the name of *Gramen caninum ſupinum longiſſimum*, growing not far from *Saliſbury*, " twenty-four feet long. This muſt, by its length, be a graſs with a creeping ſtalk; and that there is a graſs " in Wiltſhire, growing in watery meadows, ſo valuable that an acre of it lets from ten to twelve pounds, I have " been informed by ſeveral perſons. Theſe circumſtances incline me to think it muſt be the *flote feſcue*; but what- " ſoever graſs it be, it certainly muſt deſerve to be enquired after."

It may not be improper to add, that the account of the extraordinary long graſs above-mentioned was taken by RAY from the *Phytographia Britannica*, which mentions the particular ſpot where it grew, *viz.* at Mr. Tucker's, at Maddington, nine miles from Saliſbury; it is alſo remarked, that *they fat hogs with it*.

As it is now above a century ſince this inquiry was firſt made, is it not ſurpriſing, that no ſucceeding Botanic Writer ſhould have acquired ſatisfactory information concerning it? I am promiſed ſpecimens of the roots and ſeeds.

Upon

Upon the whole, from the obſervations which we ourſelves have made on this Graſs, and from what is to be collected from Authors, it appears, that if it be cultivated to any advantage it muſt be in ſuch meadows as are *naturally very wet and never drained.*

The quickeſt, and perhaps the beſt, method of propagating it would be by tranſplanting the roots at a proper ſeaſon; and if the ſoil prove ſuitable, from the quickneſs of its growth, and its creeping Stalk, it would ſoon exclude moſt other plants, and produce a plentiful crop.

In foreign countries the ſeed of this Graſs ſeems to be an object of more importance than the graſs itſelf: the following is the ſubſtance of what Mr. SCHREBER has ſaid concerning it, (vid. *Beſchreibung der Graſer*, *p.* 40.) "The ſeed has a ſweet and pleaſant taſte, particularly before it comes to its full growth, whence the plant has "acquired the name of *Manna-Graſs*. Ducks and other water-fowl feed on it with much eagerneſs: LINNÆUS has "remarked, that the water-fowl are very well acquainted with the method of collecting theſe ſeeds. It has been "obſerved likewiſe, that Fiſh are fond of it; and that Trout in particular thrive in thoſe rivers where this graſs "grows in plenty, and ſheds its ſeeds; but it is not only for Birds and Fiſh, but alſo for Man, a palatable and nutri- "tious food, and has for many years paſt been known at Gentlemen's tables under the name of *Manna-Grout*.

"The Manna Graſs is of two kinds; the one, *Panicum ſanguinale*, or *Cocks-foot Panic Graſs*; the other, *Feſtuca "fluitans*, which we have now deſcribed. The former is cultivated in ſeveral parts of Germany, and its ſeed ſomewhat "reſembles that of Millet; the latter is collected in great abundance from the plant as it grows wild in *Poland*, "*Lithuania*, the *New Marche*, and about *Franckfort*, and other places in *Sileſia*, as alſo in *Denmark* and *Sweden*, "and hence exported to all parts.

"The common method they make uſe of to gather and prepare this ſeed in *Poland*, *Pruſſia*, and the *Marche*, is "as follows. At ſun-riſe the ſeed is gathered or beat from the dewy graſs into a horſe-hair ſieve, and when a "tolerable quantity is collected, it is ſpread on a ſheet, and dried fourteen days in the ſun: it is then thrown into "a kind of wooden trough or mortar, ſtraw or reeds laid between it, and beat gently with a wooden peſtle, ſo as to "take off the chaff, and then winnowed. After this it is again put into the mortar, in rows, with dried Marygold- "flowers, Apple, and Hazel leaves, and pounded until the huſk is entirely ſeparated, and the ſeed appears bright; "it is then winnowed again, and when it is by this laſt proceſs made perfectly clean, it is fit for uſe. The Mary- "golds are added with a view to give the ſeeds a finer colour. The moſt proper time for collecting them is in July. "A buſhel of the ſeed and chaff yields about two quarts of clean ſeed.

"When boiled with milk or wine they form an extremely palatable food; and are moſt commonly made uſe of "whole, in the manner of *Sago*, to which they are in general preferred."

In the month of October laſt, I diſcovered in a watery ditch, which runs through a meadow not far from Kent-ſtreet Road, an uncommon appearance in ſome of the ſeeds of this graſs; and, on a farther examination, I found whole Panicles, the ſeeds of which were affected in a ſimilar manner; inſtead of being of their natural ſize and colour, they were enlarged to a very great degree, aſſumed externally a blackiſh colour, and were more or leſs incurvated. Struck with the novelty as well as oddity of the appearance, I conjectured at firſt that it was a diſeaſe occaſioned by ſome Inſect; I examined it more attentively, but could not find the leaſt cauſe to ſuppoſe that an inſect had been concerned in it. The ſurface of ſome of theſe ſeeds was rough, and chopped; they were light as to weight, inter-nally of a whitiſh colour, inſipid in their taſte, but not diſagreeable. Having a little before this been favoured with a ſight of ſome *horned Rie*, it now occurred to me, that this was the ſame diſeaſe which had been ſaid to affect the *Rie* only, and farther enquiry confirmed my conjecture.

As this ſingular diſeaſe of the Rie has firſt been noticed by the French, and as ſome very uncommon circumſtances have attended it, it cannot fail of proving acceptable to our readers to lay before them the ſubſtance of what they have ſaid concerning it. In the *Hiſtoire de L'Academie Royale des Sciences* there is an account given of a particular ſpecies of Gangrene or Mortification which attacked many perſons in ſome particular provinces of France. "It "began generally at the toes, and ſometimes ſpread as high as the thigh. Out of fifty people there was but one "that was attacked with this diſeaſe in the hands; and what was equally remarkable, there were no females affected "with it, except ſome little Girls.

"It appears that this ſingular malady attacked only the lower ſort of people, and that too in years of ſcarcity; "that it proceeded from bad nouriſhment, and principally from eating bread made of a certain black and diſeaſed "corn called *Ergot*, from the grains aſſuming ſomewhat of the form of a Cock's Spur. *Vid. fig.* 12.

"The manner in which this ſingular monſtroſity of the Corn is produced, is thus related by Monſieur FAGON.

"There are certain miſts which prove injurious to the Corn, and from which the greateſt part of the Ears of the "Rie defend themſelves by their beards. In thoſe, however, which this hurtful humidity can ſtrike and penetrate, "it rots the ſkin which covers the grain, blackens it, and alters the ſubſtance of the grain itſelf, the juices which "form the ſeed, being no longer kept within their ordinary bounds by the ſkin, are carried hither in too great an "abundance, and amaſſing themſelves irregularly form this moſtrous appearance.

"He obſerves, that it is *only in Rie* that the *Ergot* is to be found; that the poor people do not ſeparate this grain "from that which is good; that it was only in ſuch particular ſeaſons as favoured the growth of the *Ergot* that "this diſeaſe was prevalent; that the country people, after eating bread made of this bad corn, perceived themſelves "as if drunk, and after this the mortification generally took place; that in ſome provinces, were there was but little "of this Ergot, this ſpecies of diſeaſe was not known.

"From the obſervations made by the Farmers of that country it appears, that this bad ſpecies of grain is pro- "duced in the greateſt abundance in ſuch land as is wet and cold, and particularly in rainy ſeaſons. The Poultry "refuſed it when given them; nevertheleſs, if by accident they had eaten it, they did not appear to be hurt by it. "When ſown (as might be expected) it did not vegetate."

A kind of mortification, very ſimilar to the above deſcribed, was obſerved in this Kingdom ſome years ago; it affected the ſame kind of people, and on enquiry it was found that they had fared very hard; and that the bread which they had eaten was made of the *tailings* or *ſcreenings* of Corn; but it was not aſcertained whether it contained any of the Ergot or not.

From the inſipid taſte of this corn, as well as from its not proving fatal to Poultry, it ſeems exceedingly probable that it is not in itſelf noxious, any otherwiſe than as it affords no nouriſhment; and that thoſe people who have eaten of this corn, have in fact been abridged of a proportionate quantity of food; hence, from an impoveriſhed ſtate of the fluids, and a weak action of the veſſels, this ſpecies of Mortification might eaſily be induced.

VERONICA AGRESTIS. PROCUMBENT GARDEN-SPEEDWELL.

VERONICA *Linnæi Gen. Pl.* DIANDRIA MONOGYNIA.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

VERONICA *agreſtis*, floribus ſolitariis, pedunculatis; foliis cordatis inciſis, petiolatis; caule procumbente.

VERONICA *agreſtis*, floribus ſolitariis, foliis cordatis inciſis pedunculo brevioribus. *Linn. Syſt. Vegetab. p.* 56.

VERONICA floribus ſolitariis, foliis cordatis inciſis petiolatis. *Hudſon. Fl. Angl. p.* 6.

VERONICA caule procumbente; foliis petiolatis, ovatis, crenatis. *Haller. Hiſt. V.* 1. *n.* 594.

VERONICA *agreſtis*. *Scopoli Fl. Carniol. p.* 21. DIAGN. Primiflora; foliis ovato-cordatis, crenatis, pedunculo brevioribus.

VERONICA floribus ſingularibus, in oblongis pediculis, Chamædryfolia. *Raii Syn. p.* 279. Germander-Speedwell or Chickweed.

ALSINE foliis Triſſaginis. *Ger. emac.* 616. *Parkinſon.* 764.

ALSINE Chamædryfolia floſculis pediculis oblongis inſidentibus. *Bauh. Pin.* 250. *Oeder. Fl. Dan. Icon.* 449.

RADIX annua, fibroſa.

CAULES plures, primum erecti, tandem procumbentes, ſemipedales, ſubvilloſi, teretes.

FOLIA alterna, ovato-cordata, ſerrata, petiolis brevibus inſidentia, ſubhirſuta.

FLORES pedunculati, pedunculi axillares, longitudine fere foliorum, poſt floreſcentiam reflexi.

CALYX: PERIANTHIUM quadripartitum, laciniis lanceolatis, hirſutis, ſubtortuoſis, *fig.* 1.

COROLLA monopetala, ſubrotata, calyce brevior, læviſſimo fere tactu decidua; TUBUS breviſſimus; LACINIÆ concavæ, ſubrotundæ, nunc penitus cœruleæ, nunc venis cœruleis ſtriatæ, *fig.* 2.

STAMINA: FILAMENTA duo, alba, medio craſſiora; ANTHERÆ cœruleſcentes, *fig.* 3.

PISTILLUM: GERMEN ſubcompreſſum, hirſutulum, baſi nectario cinctum; STYLUS viridis, apice incraſſatus, ſtaminibus brevior; STIGMA album, capitatum, *fig.* 4.

PERICARPIUM CAPSULÆ *Veronicæ ſerpyllifolia* ſimilis, at major rotundiorque, *fig.* 5.

SEMINA pallide fuſca, plerumque 6 in ſingulo loculamento, rugoſa, hinc convexa, inde concava, *fig.* 6.

ROOT annual and fibrous.

STALKS ſeveral, firſt upright, then procumbent, about ſix inches in length, round and ſomewhat villous.

LEAVES alternate, of an oval-heart ſhape, ſerrated, placed on ſhort foot-ſtalks and ſlightly hairy.

FLOWERS placed on foot-ſtalks, which proceed from the Axillæ of the leaves, and are nearly of the ſame length; after the flowers are gone off turning back.

CALYX: a PERIANTHIUM divided into four laciniæ, which are lanceolate, hairy, and ſomewhat twiſted, *fig.* 1.

COROLLA monopetalous, ſomewhat wheel-ſhaped and ſhorter than the Calyx, falling off on the leaſt touch; the TUBE very ſhort; the LACINIÆ concave, and roundiſh, ſometimes wholly blue, ſometimes ſtriped with blue, *fig.* 2.

STAMINA: two FILAMENTS of a white colour and thickeſt in the middle; ANTHERÆ blueiſh, *fig.* 3.

PISTILLUM: GERMEN flattiſh, a little hairy and ſurrounded at bottom by a Nectarium; the STYLE green, thickeſt at top, and ſhorter than the Stamina; STIGMA roundiſh and white, *fig.* 4.

SEED-VESSEL a CAPSULE like that of the *Veronica ſerpyllifolia*, but larger and rounder, *fig.* 5.

SEEDS of a pale brown colour, generally 6 in each cavity, wrinkled, convex on one ſide, and hollow on the other, *fig.* 6.

THERE are few Botaniſts but what are apt to confound this ſpecies of Veronica with the *Veronica arvenſis*; and this appears to ariſe in ſome degree from their ſimilarity to each other, but more perhaps from the ſimilitude of their Latin, and the ambiguity of their Engliſh names. To prevent in ſome degree this confuſion, I have taken the liberty of altering the Engliſh name of *Germander-Speedwell* or *Chickweed* to that of *procumbent Garden-Speedwell*, in order that the young Botaniſt may thereby more readily diſtinguiſh it from the ſpecies abovementioned. The ſtalks of the *Agreſtis* are uſually procumbent, and it is found generally in Gardens; whereas the *Arvenſis* has an upright ſtalk, and with us is found moſt commonly on Walls. Beſides ſuch obviouſly diſtinguiſhing characters, theſe two plants differ conſiderably in many other reſpects. In the *Arvenſis* the leaves are ſeſſile, in *this* they are placed on foot-ſtalks; in the *Arvenſis* the flowers are ſeſſile, in *this ſpecies* they likewiſe are placed on foot-ſtalks; and a difference ſtill more remarkable, or at leaſt more curious, exiſts, which ſeems not to have been attended to, *viz.* the largeneſs and roundneſs of the ſeed-veſſels, and the particular ſtructure of the ſeed. In moſt of the Veronicas the ſeed-veſſel is heart-ſhaped, and even in this ſpecies it retains ſomewhat of that form, although each of the Cavities is large and round; and if we examine the form of the ſeeds, we ſhall not wonder at this particular conſtruction; for each ſeed, inſtead of being ſmall and flat as in other Veronicas, is large, convex on one ſide, hollow on the other, and wholly different in its appearance. This peculiarity of ſtructure ſhows what inconſtancy there is in the parts of fructification, and how improper it would be to found a Genus on the particular form of any one of them, ſince thoſe which are in general the moſt uniform are ſometimes ſubject to ſuch uncommon variations. The number of ſeeds in each Capſule is generally about 12, LINNÆUS ſays 8, SCOPOLI from 16 to 20.

This ſpecies grows frequently in Gardens, and flowers through moſt of the ſummer months. No particular virtues or uſes are attributed to it.



Veronica agrestis.

1 2 3 3 4 4 5 6 7



Ranunculus bulbosus.

Kilburn pinxt et sculpt

RANUNCULUS BULBOSUS. ROUND-ROOTED OR BULBOUS CROWFOOT.

RANUNCULUS *Linnæi Gen. Pl.* POLYANDRIA POLYGYNIA.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

RANUNCULUS *bulboſus*, calycibus retroflexis, pedunculis ſulcatis, caule erecto multifloro, foliis compoſitis. *Linnæi Syſt. Vegetab. p.* 430. *Sp. Pl.* 778. *Fl. Suecic.* 196.

RANUNCULUS radice ſubgloboſa, foliis hirſutis, ſemitrilobis, lobis petiolatis acute ſerratis. *Haller. Hiſt. v.* 2. *p.* 74.

RANUNCULUS. *Scopoli Fl. Carn. v.* 1. *p.* 400. DIAGN. Radix globoſa. Calyces reflexi. Squamula nectarifera obtuſe trigona.

RANUNCULUS pratenſis radice verticilli modo rotunda. *Bauhin. Pin.* 179. *Fuſchii Icon.* 160. *Gerard. Emac.* 953. *Parkinſon* 329. *Raii Synop.* 247. *Hudſon. Fl. Angl.* 211. *Fl. Dan. Icon.* 551.

RADIX perennis, *ſubrotunda*, albida, ſolida, ſuperne et inferne depreſſior, hinc radicem Rapæ quodammodo referens.

CAULIS pedalis, teres, *erectus*, fiſtuloſus, hirſutus, ramoſus.

FOLIA *radicalia* petiolis longis, hirſutis, baſi vaginantibus inſidentia, ſubprocumbentia, hirſuta, venoſa, trilobata, lobo medio majori et longius petiolato, ſemitrifido, ſegmentis acute inciſis; lobis lateralibus trifidis, ſegmentis inferioribus profundius diviſis: caulina ſubſeſſilia in lacinias plures tenuiores diviſi.

PEDUNCULI *ſulcati.*

CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, concavis, *reflexis*, piloſis, apice obtuſiuſculis, margine membranaceis, baſi *ſubpellucidis*, *fig.* 1.

COROLLA PETALA quinque obcordata, flava, nitentia, *fig.* 2.

NECTARIUM: ſquamula flava ſubemarginata ad baſin petali, *fig.* 3.

STAMINA: FILAMENTA plurima, receptaculo inſerta; ANTHERÆ oblongæ, flavæ, ſubincurvatæ, *fig.* 4.

PISTILLUM: GERMINA numeroſa in capitulum collecta; STYLI nulli; STIGMATA minima reflexa, *fig.* 5.

SEMINA plurima compreſſa, fuſca, mucronata, lævia, arillata, *fig.* 6.

Fig. 7. ARILLUS, *fig.* 8. ſemen denudatum.

ROOT perennial, *roundiſh*, white and ſolid, flattened a little both at top and bottom, hence ſomewhat reſembling a Turnep.

STALK a foot high, round, *upright*, hollow, hairy and branched.

LEAVES: the *radical* leaves placed on long hairy foot-ſtalks, which at bottom embrace the ſtalk, ſomewhat procumbent, hairy, veiny, and divided into three lobes; the mid-lobe largeſt and placed on a longer foot-ſtalk than the others, divided half way down into three ſegments which are ſharply cut in; the ſide-lobes trifid, the lower ſegments more deeply divided than the others; the leaves of *the ſtalk* nearly ſeſſile, deeply divided into numerous and narrower ſegments.

FOOT-STALKS of the flowers *grooved.*

CALYX: a PERIANTHIUM of five leaves, the leaves oval, hollow, *turned back* and hairy, bluntiſh at top, membranous at the edges, *thin and ſomewhat tranſparent* at bottom, *fig.* 1.

COROLLA: five PETALS, heart-ſhaped, yellow, and ſhining, *fig.* 2.

NECTARY: a ſmall yellow ſcale at the bottom of the petal, with a ſlight indentation at top, *fig.* 3.

STAMINA: FILAMENTS numerous and inſerted into the receptacle; ANTHERÆ oblong, yellow, and bending a little inwards, *fig.* 4.

PISTILLUM: GERMINA numerous, collected into a little head; STYLES none; STIGMATA very ſmall and bending back, *fig.* 5.

SEEDS numerous, flat, brown, ſmooth, pointed, and covered with an Arillus, *fig.* 6.

Fig. 7. the ARILLUS, *fig.* 8. the ſeed taken out of it.

THIS *Crowfoot* has been conſidered by ſome Authors as the ſame Species with the *Ranunculus repens*, but certainly without any propriety; for there can be no doubt but they are as diſtinct as any two ſpecies of *Ranunculus* whatever. It is diſtinguiſhed from the *repens* by ſeveral peculiarities, the principal of which are, 1ſt, its *reflexed calyx*, the turning back of which does not depend on any accidental circumſtances, but ſolely on its particular ſtructure: if it be plucked off, and held up to the light, the lower half of it will appear thin and almoſt tranſparent; hence, not having a ſufficient degree of ſolidity to ſupport itſelf upright, it is reflected downwards; 2dly, the root in this ſpecies is *round*, and *ſolid*, in the *repens* it is *fibrous*; and, 3dly, (which perhaps may be conſidered as the moſt eſſential difference), the ſtalk of the *bulboſus* is never known to *throw out any Stolones or Creepers*, which the *repens* always does in every ſoil and ſituation.

This Species blows earlier than either the upright or creeping Crowfoot, and is the ſecond flower which, next to the Dandelion, covers our meadows and paſtures with that delightful yellow which almoſt dazzles the eye of the beholder.

Like the reſt of the Crowfoots, it poſſeſſes the property of inflaming and bliſtering the ſkin; but more particularly the Root, which is ſaid to raiſe bliſters with leſs pain and more ſafety than Spaniſh flies; and hence, where bliſters have been thought neceſſary, theſe roots have been applied for that purpoſe, particularly to the Joints in caſes of the Gout. On being kept they loſe their ſtimulating quality, and are even eatable when boiled.

HOFFMAN informs us, that Beggars make uſe of them to bliſter their ſkins, in order to excite compaſſion.

The juice of this herb is ſaid to be more acrid than that of the *Ranunculus ſceleratus*, and if applied to the noſtrils it provokes ſneezing.

Hogs are fond of the roots, and will frequently dig them up.

It abounds in dry paſtures, and flowers in May. It is cultivated when double, as well as the Upright Meadow Crowfoot, which laſt occurs in almoſt every Garden, under the name of *Yellow Batchelors Buttons.*

ANTIRRHINUM *ELATINE.* SHARP-POINTED FLUELLIN.

ANTIRRHINUM *Lin. Gen. Pl.* DIDYNAMIA ANGIOSPERMIA.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI, FLORE MONOPETALO IRREGULARI.

ANTIRRHINUM foliis haſtatis alternis, caulibus procumbentibus. *Linn. Sp. Pl.* 85.

ANTIRRHINUM caule procumbente, foliis haſtatis, imis conjugatis, ſuperioribus alternis. *Haller. Hiſt. v.* 1. *p.* 14. 6. *n.* 340.

ELATINE folio acuminato, in baſi auriculato, flore luteo. *Bauh. Pin.* p. 253.

ELATINE folio acuminato. *Parkinſon* 553.

ELATINE altera. *Ger. Emac.* 623.

LINARIA *Elatine* dicta, folio acuminato. *Raii Syn.* *282.

ANTIRRHINUM *Elatine.* *Hudſon. Fl. Angl. p.* 237. *Scopoli Fl. Carn. p.* 444. *OEder. Fl. Dan. Ic.* 426.

TOTA PLANTA piloſa.
RADIX fibroſa, annua, albida.
CAULES numeroſi, teretes, ſubramoſi, in junioribus plantis ſuberecti, tandem procumbentes, ad duos pedes et ultra ſæpe extenſi.

FOLIA petiolata, ima ſubrotunda, oppoſita; proxima dentata, alterna; quæ ſequuntur magna ex parte haſtata.

PEDUNCULI axillares, alterni, penduli, longitudine foliorum.
CALYX: PERIANTHIUM quinquepartitum, perſiſtens ſegmentis ovato-lanceolatis acutis, *fig.* 1.
COROLLA monopetala, ringens, flava; TUBUS breviſſimus; LIMBUS bilabiatus, labium ſuperius bifidum, ſegmentis obtuſis, inferne purpureis, inferius trifidum, ſegmentis obtuſis, medio productiore, et paulo minore; PALATUM prominulum, flavum, *fig.* 2.; NECTARIUM ſubulatum, flavum, longitudine ſegmentorum calycis, *fig.* 3.

STAMINA: FILAMENTA quatuor, quorum duo paulo longiora; ANTHERÆ purpureo-fuſcæ, coaleſcentes, *fig.* 4.
PISTILLUM: GERMEN ſubrotundum, compreſſum, apice villoſum; STYLUS filiformis, longitudine ſtaminum, apice incraſſatus, uncinatus; STIGMA ſimplex, *fig.* 5, 6, 7.
PERICARPIUM: CAPSULA rotunda, bilocularis, bivalvis, valvis deciduis, foramine magno in utroque latere capſulæ relicto, valvæ orbiculatæ, concavæ, *fig.* 8, 9, 10.
SEMINA nigra, rugoſa, 8—10 in ſingulo loculamento, *fig.* 12.

THE WHOLE PLANT hairy.
ROOT fibrous, annual, whitiſh.
STALKS numerous, round, a little branched, in the young plants nearly upright, in the old ones trailing on the ground, frequently to the diſtance of two feet or more.
LEAVES ſtanding on foot-ſtalks, the bottom leaves roundiſh and oppoſite, the next to thoſe are indented and alternate, and thoſe which follow are for the moſt part haſtate.
PEDUNCLES alternate, pendulous, the length of, and proceeding from the Alæ of the leaves.
CALYX: a PERIANTHIUM divided into five ſegments perſiſting, the ſegments lanceolate, *fig.* 1.
COROLLA monopetalous, ringent, and yellow; the TUBE very ſhort; the LIMB divided into two lips, the upper lip bifid, the ſegments obtuſe, and purple underneath; the lower lip trifid, the ſegments obtuſe, the middle one longeſt and leaſt; the PALATE prominent and yellow, *fig.* 2.; the NECTARIUM the length of the ſegments of the Calyx, ſmall and tapering, *fig.* 3.
STAMINA: four FILAMENTS, two of which are a little longer than the others; the ANTHERÆ purpliſh-brown, adhering together, *fig.* 4.
PISTILLUM: the GERMEN roundiſh, flattened, at top hairy; the STYLE filiform, the length of the ſtamina, thickened at top and hooked; the STIGMA ſimple, *fig.* 5, 6, 7.
SEED-VESSEL: a round CAPSULE of two cavities and two valves, the valves round and concave, on falling off leaving a large hole in each ſide of the capſule, *fig.* 8, 9, 10.
SEEDS black, and wrinkled, from 8 to 10 in each cavity, *fig.* 12.

This ſpecies of *Antirrhinum* grows generally in Corn-fields; and in ſome parts of England is much more common than it is with us. In the Corn-fields about *Peckham* I have generally found it in bloom in July, Auguſt, and September, and even later. It very much reſembles the *Antirrhinum ſpurium* in its general habit; but is readily diſtinguiſhed by its *pointed leaves.* Some Writers have conſidered it as poſſeſſed of healing properties, and affirm that the expreſſed juice of the plant, or its diſtilled water taken inwardly and applied externally, has checked and cured ſpreading and cancerous Ulcers; and RAY relates a ſtory from LOBEL, of a poor Barber, who by the above uſe of this plant ſaved his noſe, which had been condemned to be cut off by ſeveral eminent Phyſicians and Surgeons.



Antirrhinum Elatine.



K

Bryum Scoparium.

BRYUM SCOPARIUM. BROOM BRYUM.

BRYUM *Linnæi Gen. Pl.* CRYPTOGAMIA MUSCI.

Raii Syn. Gen. 3. MUSCI.

BRYUM *ſcoparium*, Antheris erectiuſculis, pedunculis aggregatis, foliis ſecundis recurvatis, caule declinato. *Linnæi Syſt. Vegetab. p.* 797.

HYPNUM foliis falcatis, heteromallis; vaginis multifloris. *Haller. Hiſt. n.* 1777.

HYPNUM *ſcoparium. Scopoli Fl. Carn. p.* 334. DIAGN. Floreſcentia Hyemalis. Folia arcuata, ſecunda, tenuia. Setæ ſæpe plures.

BRYUM *ſcoparium*: ſurculo declinato, ramoſo, foliis ſecundis, recurvatis, primordialibus plumuloſis. *Necker. method. muſc. p.* 224.

HYPNUM *ſcoparium. Weis. Cryptogam. p.* 213.

BRYUM reclinatum, foliis falcatis, ſcoparum effigie. *The ſickle-leaf'd bending Beaſom Bryum. Dillen. muſc. p.* 357. *tab.* 46. *fig.* 16.

BRYUM erectis capitulis anguſtifolium, caule reclinato. *Cat. Giſs.* 222. *Raii Syn.* 95. *Hudſon. Fl. Angl. p.* 406.

CAULES unciales aut biunciales et ultra, ſuberecti, ramoſi, in denſo cæſpite collecti, ſordide rufi, infra multo tomento fuſco obſiti.

FOLIA caulem inæqualiter circumſtant, hinc in quibuſdam locis nudiuſculus relinquitur, in aliis foliis crebrioribus veſtitur, præcipue ad apicem, longa, linearia, acuminata, canaliculata, *fig.* 1. recurvata, ſecunda.

PEDUNCULI unciales aut biunciales, ad baſin rubicundi, erecti, ex uno latere caulium plerumque oriuntur, aliquando vero ex apice, ut plurimum ſolitarii, ſubinde vero duo ex eodem perichætio proveniunt, baſi bulbillo cylindraceo terminati, *fig.* 7. qui foliis pluribus latiuſculis, pilo terminatis, acû facile ſeparabilibus includitur, *fig.* 8, 9.

CAPSULÆ oblongæ et fere cylindraceæ, nunc erectæ, nunc paululum incurvatæ, *fig.* 3.; OPERCULUM roſtratum, tenue, longitudine capſulæ et concolor, *fig.* 4.; ORA ciliata ſive denticulata, *fig.* 5.; CALYPTRA ſtraminea, longitudine Capſulæ, poſtquam medio diſrumpitur, baſi ſuo capſulam arcte cingit, *fig.* 2.; POLLEN, viride, *fig.* 6.

STALKS from one to two inches high and more, nearly upright, branched, growing thickly together, of a dirty red colour, and covered at bottom with a dark brown woolly ſubſtance.

LEAVES: the leaves cover the ſtalk unequally, hence in ſome places it is left rather naked, in others more thickly covered with leaves, particularly towards the top, are long, linear, pointed, grooved, *fig.* 1. bent back, and turning all one way.

FOOT-STALKS an inch or two inches high, towards the bottom reddiſh, upright, ariſing generally from the ſide of the ſtalks, but ſometimes from the top, moſt commonly ſingle, but now and then two proceed from the ſame perichætium, furniſhed at bottom with a cylindrical bulb, *fig.* 7. which is incloſed by many broadiſh leaves, terminating in a hair, and eaſily ſeparated by a needle, *fig.* 8, 9.

CAPSULES oblong and almoſt cylindrical, ſometimes upright, ſometimes a little incurvated, *fig.* 3. the OPERCULUM the length of the Capſule, and of the ſame colour, terminating in a long ſlender point, *fig.* 4.; the MOUTH ciliated or furniſhed with little teeth, *fig.* 5.; the CALYPTRA ſtraw-coloured, the length of the Capſule, after burſting in the middle cloſely embracing the Capſule by its baſe, *fig.* 2.; the POLLEN green, *fig.* 6.

DILLENIUS very juſtly remarks, that this Moſs ſeems to partake of the nature of both *Bryum* and *Hypnum*; but in his opinion it comes neareſt to the *Bryum*; and of the ſame ſentiment appear to be LINNÆUS and NECKER, while HALLER, SCOPOLI, and WEIS, rank it among the *Hypnums*, and this they are led to chiefly from the Peduncles being furniſhed at bottom with a kind of *Perichætium:* but DILLENIUS very properly obſerves, that although the Peduncle is ſurrounded at bottom by many *ſquamæ* or *folioli*; yet theſe are not ſimilar to what occur in the generality of *Hypnums*, as they may with the point of a pin be eaſily ſeparated from one another, and then the baſe of the Peduncle appears to be furniſhed with a *bulbillus* as in moſt of the *Bryums:* this circumſtance, added to its general habit, appears fully to juſtify this moſt excellent Botaniſt in placing it with the *Bryums*, from whence it ought not to have been ſeparated without more weighty reaſons than have been advanced.

This Moſs diſtinguiſhes itſelf from moſt others by its beautiful and lively verdure. When young it puts on a very different appearance from what it has when farther advanced, being much ſhorter, and its leaves upright; and DILLENIUS has ſometimes remarked in this ſpecies *Stellulæ fæmineæ.*

It grows in very large clumps or patches, forming a ſoft and delightful carpet, on the banks which ſurround woods, at the bottom of trees, and on heaths.

It is found on ſome parts of Hampſtead-heath producing its fructifications in February and March.

ERVUM TETRASPERMUM. SMOOTH-PODDED TINE TARE.

ERVUM *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

ERVUM *(tetraſpermum)* pedunculis ſubbifloris, ſeminibus globoſis quaternis. *Linn. Syſt. Vegetab. p.* 554.

VICIA foliis linearibus, ſiliquis gemellis glabris. *Haller. Hiſt. v.* 1. *p.* 184.

ERVUM *tetraſpermum. Scopoli Fl. Carniol.* DIAGN. Pedunculi ſubbiflori. Siliqua glabra, obtuſa, tetraſperma.

VICIA ſegetum ſingularibus ſiliquis glabris. *Bauh. Pin. p.* 345.

VICIÆ ſive Craccæ minimæ ſpecies cum ſiliquis glabris. *I. Bauhin.*

CRACCA minor ſiliquis ſingularibus, floſculis cœruleſcentibus. *Hoff. C. H. Alt. Raii Syn. p.* 322. Tine-Tare with ſmooth pods. *Hudſon. Fl. Angl. p.* 280. *OEder. Fl. Dan. Icon.* 95.

RADIX annua, fibroſa.

CAULES in apertis locis læves, tenues, debiles, inter ſegetes vero (ubi ſæpius invenitur), capreolis erecte ſeſe ſuſtentant, pedales et ultra.

STIPULÆ ad baſin foliorum, duo, ſimplices, utrinque acuminatæ.

FOLIA pinnata, lævia, lanceolata-linearia, parium trium ad quinque uſque, capreolo ramoſo terminata.

PEDUNCULI longitudine foliorum, plerumque biflori.

CALYX: PERIANTHIUM quinquedentatum, perſiſtens, dentibus inæqualibus, acutis, duobus ſuperioribus brevioribus, latioribus, ſurſum tendentibus, obtuſe diviſis, *fig.* 1.

COROLLA papilionacea, *fig.* 2.; VEXILLUM ſubemarginatum, limbus reflexus, venis purpureis pictus, *fig.* 4.; ALÆ albæ, conniventes, *fig.* 5.; CARINA alis brevior, obtuſa, *fig.* 6.

STAMINA: FILAMENTA diadelpha (ſimplex et novemfidum) aſſurgentia, *fig.* 7, 8. ſupremum liberum, *fig.* 8.; ANTHERÆ ſimplices.

PISTILLUM: GERMEN compreſſum; STYLUS aſſurgens; STIGMA capitatum, villoſum, *fig.* 9.

PERICARPIUM: LEGUMEN *læve*, teretiuſculum, *tetraſpermum*, *fig.* 10.

SEMINA ſubrotunda, fuſceſcentia, nigro marmoreata, *fig.* 11.

ROOT annual and fibrous.

STALKS in open places are ſlender and weak, but among the corn (where this plant is moſt commonly found), they ſupport themſelves upright by means of their tendrils, and grow to a foot or more in height.

STIPULÆ at the bottom of the leaves, two, ſimple, and pointed at each end.

LEAVES pinnated, ſmooth, lanceolate, and linear, from three to five pair, terminated by a branched tendril.

PEDUNCLES the length of the leaves, generally ſuſtaining two flowers.

CALYX: a PERIANTHIUM having five teeth and continuing, the teeth unequal and pointed, the two uppermoſt ſhorteſt, broadeſt, and turning a little upwards, at bottom obtuſely divided, *fig.* 1.

COROLLA papilionaceous, *fig.* 2.; the VEXILLUM ſlightly nicked in at top, the limb ſomewhat turned back and ſtreaked with purple, *fig.* 4.; the ALÆ white and cloſing together, *fig.* 5.; the CARINA ſhorter than the Alæ and obtuſe, *fig.* 6.

STAMINA: ten FILAMENTS uniting into two bodies, of which one forms the lowermoſt, *fig.* 7.; and one the uppermoſt which is free, *fig.* 8.; ANTHERÆ ſimple.

PISTILLUM: GERMEN flattened; STYLE riſing upward; STIGMA forming a little head and villous, *fig.* 9.

SEED-VESSEL: a LEGUMEN, *ſmooth*, roundiſh, and *containing four ſeeds*, *fig.* 10.

SEEDS nearly round, brownſh and mottled with black, *fig.* 11.

This ſpecies of *Ervum* or *Tine-Tare* is found in moſt Corn-fields, often to the Farmers ſorrow, as it frequently proves very injurious to the Corn, laying hold of it by means of its tendrils, and if the ſeaſon favours its growth, quite overcoming it. Like moſt plants of this kind it is exceedingly fertile: on one plant which I caſually pulled up, I counted 220 pods; and as each pod contains four ſeeds, there muſt have been from a ſingle ſeed the amazing produce of 880.

At firſt ſight this ſpecies has a conſiderable reſemblance to the *Ervum hirſutum*; but the ſlighteſt attention will diſcover the difference. In the *Ervum hirſutum* the pods contain only *two ſeeds*, and are *hairy*; in the *Tetraſpermum* they contain *four*, and are *ſmooth*; in the *hirſutum* the flowers grow in a kind of *cluſter*; in *this ſpecies* there is ſeldom more than *two* grow together.

The figure which I have given is intended to repreſent the plant as it grows among the Corn; when it is found by itſelf, and in a poor ſoil, it is often not ſo large.



Ervum tetraspermum



Conium maculatum.

CONIUM MACULATUM. HEMLOCK.

CONIUM *Linnæi Gen. Pl.* PENTANDRIA DIGYNIA.

Raii Syn. Gen. 11. UMBELLIFERÆ HERBÆ.

CONIUM *maculatum* ſeminibus ſtriatis. *Linnæi Syſt. Vegetab. p.* 229.

CICUTA. *Haller. Hiſt. helv. n.* 766. *v.* 1. *p.* 337.

CONIUM *maculatum. Scopoli Fl. Carn. p.* 207.

CICUTA major. *Bauhin. Pin.* 160.

CICUTA. *Ger. Emac.* 1061.

CICUTA vulgaris major. *Parkinſon* 933. *Raii Syn. p.* 215. *Hudſon. Fl. Angl. p.* 100. *Störck. Cicut. Suppl. p.* 7. *t.* 1.

RADIX biennis, craſſitudine digiti, longa uſque ad pedalem, in crura ſæpe diviſa, juniori Paſtinacæ haud diſſimilis, odoris gravis, et ſaporis ſubdulcis: ſecundo anno in cauleſcente planta ſucco fere caret, firma ſolidiorque evadit.

CAULIS orgyalis, teres, nitidus, lævis, fiſtuloſus, ad baſin craſſitie pollicis, rore glauco tectus, et maculis ſanguineis pictus, verſus ſummitatem ramoſus, et ſtriatus.

FOLIA inferiora magna, etiam bipedalia, atro-virentia, nitentia, multiplicato-pinnata, pinnulis oblongis inciſo-ſerratis; SPATHA ſulcata.

INFLORESCENTIA. *Umbella univerſalis* Radiis plurimis patentibus ſtriatis; *partialis* conſimilis.

CALYX: *Involucrum univerſale* e foliolis 5—7 conſtat, lanceolato acuminatis, reflexis, margine albidis, *fig.* 1.; *partiale* 3 aut 4 dimidiatis, extrorſum patentibus, *fig.* 2.

COROLLA: PETALA quinque, alba, inæqualia, inflexo cordata, *fig.* 3.

STAMINA: FILAMENTA quinque, alba, longitudine Corollæ; ANTHERÆ albæ, *fig.* 3.

PISTILLUM: STYLI duo, albi, filiformes, non admodum breves; STIGMATA ſubrotunda; GERMEN inferum, ſtriatum, *fig.* 3, 4.

FRUCTUS ſubrotundus, e binis ſeminibus fuſceſcentibus componitur, hinc planiuſculis, illinc gibbis, cum *ſtriis quinque elevatis crenulatis*, *fig.* 4, 5.

ROOT biennial, the thickneſs of one's finger, from ſix inches to a foot in length, frequently forked, and not unlike that of a young Parſnip, of a diſagreeable ſmell and ſweetiſh taſte: in the ſecond year of its growth when the plant has a flowering ſtem, it becomes drier, more firm and ſolid.

STALK about ſix inches high, round, ſhining, ſmooth and hollow, at bottom the thickneſs of one's thumb, covered with a blueiſh kind of powder which eaſily wipes off, and ſpotted with red, towards the top branched and ſtriated.

LEAVES. The bottom leaves large, even two feet long, of a dark green colour and ſhining, many times pinnated, the pinnulæ oblong and ſharply cut in; the SPATHA grooved.

INFLORESCENCE. The *Univerſal Umbell* is compoſed of many ſtriated and ſpreading Radii; the *Partial Umbell* ſimilar to it.

CALYX: the *Univerſal Involucrum* conſiſts of 5 or 7 leaves, which are lanceolate, turned back, and whitiſh at the edges, *fig.* 1.; the *Partial Involucrum* is compoſed of 3 or 4 leaves, which ſurround one half of the ſtalk only, and ſpread outward, *fig.* 2.

COROLLA: PETALS five, white, unequal, heart-ſhaped, and bent in at top, *fig.* 3.

STAMINA: FILAMENTS five, white, the length of the Corolla; ANTHERÆ white, *fig.* 3.

PISTILLUM: GERMEN beneath the Corolla, ſtriated, *fig.* 3, 4.; STYLES two, filiform, and not very ſhort; STIGMATA round, *fig.* 3.

FRUIT is roundiſh, and compoſed of two browniſh ſeeds, flattiſh on one ſide and round on the other, with *five notched and elevated ridges*, *fig.* 4, 5.

The powerful deleterious properties of this herb have been long known and acknowledged by all botanic writers; whence it has been commonly ranged in the claſs of Vegetable Poiſons: and as ſuch active principles under ſkilful management are likely to afford the moſt efficacious remedies, this plant has been alſo admitted as an article of the Materia Medica. Until lately, however, the uſe of it was chiefly confined to external applications, where its narcotic qualities may undoubtedly aſſiſt in aſſuaging pain, forwarding ſuppuration, &c. But in the year 1760, Dr. STÖRCK, a famous Practitioner at Vienna, publiſhed a treatiſe on Hemlock, recommending an extract made of the inſpiſſated juice of the herb to be taken internally, from four grains to ſixty, or upwards, every day, as a cure for the *Scrophula*, *Cancer*, and others of the moſt terrible and inveterate diſorders incident to the human body.

Our Phyſicians, though laudably cautious of admitting or truſting to novelties, received Dr. STÖRCK's publication with uncommon ardour, and perhaps no new medicine was ever more immediately or generally tried than this *Extractum Cicutæ*. The ſucceſs however not anſwering their expectation, led ſome to think they had miſtaken the Plant. The Author was applied to, and this produced a ſupplement (printed 1764), wherein the ſpecies is figured, and clearly ſhewn to be the *Conium maculatum* of LINNÆUS. It were to be wiſhed this had cleared up all difficulties. In his firſt treatiſe the Doctor tells us, that the freſh root ſliced, yielded a bitter acrid milk, of which a ſingle drop or two being applied to the tip of his tongue, preſently rendered it painful, rigid, and ſo much ſwelled that he could not ſpeak; yet it is certain, that the roots of our *Hemlock* may be chewed and ſwallowed in conſiderable quantities without producing any ſenſible effect. Mr. ALCHORNE (who, I believe, was the firſt that laudably exerted himſelf in inveſtigating this matter), aſſures me, that he has tried this in every ſeaſon of the Year, and in moſt parts of our Iſland, without finding any material difference: and that he

he has alſo been well informed, both from *Berlin* and *Vienna*, that the *Hemlock* Roots in thoſe countries are no more virulent than ours about *London*. Mr. TIMOTHY LANE informs me, that he alſo with great caution made ſome experiments of the like kind, and in a ſhort time found he could venture to eat a conſiderable part of a Root without any inconvenience; after that, he had ſome large Roots boiled, and found them as agreeable eating at dinner with meat as Carrots, which they in taſte ſomewhat reſembled: and as far as his experience, joined with that of others, informed him, the Roots might be cultivated in Gardens, and either eaten raw like Celery, or boiled as Parſnips or Carrots; that in Spring and Winter they are not woody as in Summer; that he has eaten them from different places and in all ſeaſons; and that he perceived ſome Roots were more pungent than others, but not in any degree worthy notice.

The experiments of theſe ingenious Gentlemen ſufficiently evince the innocence of the Roots of this plant, contrary to what has been aſſerted by Dr. STÖRCK; and hence we may infer, that whatever accounts have been related by Authors of their poiſonous qualities, the Roots of ſome other Plant muſt have been made uſe of. In the poiſonous quality of the *Herb*, however, all Authors ſeem agreed; but with reſpect to its efficacy as a medicine they very much differ. If we may believe Dr. STÖRCK, there is ſcarce a diſeaſe incident to the human body which it either does not cure, or relieve; but it is remarkable that a copious experience of fifteen years, as well in the great Hoſpitals of this Metropolis as in the private practice of the whole Kingdom, ſhould not have afforded one inſtance of a perfect cure by the Extract, at leaſt none ſuch has appeared among the valuable collections of caſes publiſhed by our College of Phyſicians, and other Medical Societies. Both Dr. FOTHERGILL of London, and the late Dr. RUTTY of Ireland, men of the greateſt eminence in their profeſſion, have declared that the ſucceſs attending it has not been equal to what they had reaſon to expect from Dr. STÖRCK's account of it (*vid. Medical Obſervations and Enquiries, vol.* 3.); yet though it had failed them in the cure of many of thoſe diſeaſes which unfortunately were the *opprobria medicorum*; it had proved beneficial in various obſtinate complaints. Scrophulous tumours were to appearance diſſolved by it; the progreſs both of occult and ulcerated Cancers was retarded, the pain alleviated, and the diſcharge changed for the better in every reſpect; divers putrid and ſordid Ulcers were by the uſe of *Hemlock* remarkably mended in their diſcharge, and diſpoſed to heal, in ſome of which the Sublimate had been given in vain; hence the Extract is ſtill frequently uſed, and will probably continue to be preſcribed, becauſe its effects, as an Anodyne, will often afford at leaſt a temporary relief, and becauſe in deſperate diſeaſes a doubtful remedy ſeems better than none at all.

The taking of the Extract is generally attended with a giddineſs, and often with a pain of the head, nauſea, and other diſagreeable ſymptoms: in ſome, however, its effect are apparently anodyne, as it eaſes pain and promotes reſt, even where Opium has failed.

Phyſicians ſeem ſomewhat divided about the beſt mode of exhibiting this medicine; ſome recommending the extract as being moſt eaſily taken in the form of pills; others the powder, as not being ſubject to that variation which the extract is liable to from being made in different ways. With reſpect to the period likewiſe at which the plant ſhould be gathered, they ſeem not perfectly agreed; ſome recommending it when in its full vigour, and juſt coming into bloom; others when the flowers are going off, and the whole plant has acquired a yellowiſh hue. That the Extract might be at all times equally active, and uniformly prepared, Dr. CULLEN has for many years recommended the making it from the unripe ſeeds; and this mode the College of Phyſicians at Edinburgh has thought proper to adopt in their new Pharmacopœia.

Hemlock grows very frequently on banks by the ſides of Roads, by hedge ſides, and in Fields and Gardens, flowering in the month of July.

We have a common Engliſh proverb, that *what is one Man's Meat is another Man's Poiſon*, and agreeable to this are the lines of LUCRETIUS which relate to this plant:

" *Pingueſcere ſæpe Cicutâ*
" *Barbigeros pecudes homini quæ eſt acre venenum.*"

That it affords nouriſhment to Birds likewiſe there is ſufficient evidence: our learned Philoſopher and accurate Naturaliſt Mr. RAY found in the Crop of a Thruſh abundance of *Hemlock* ſeeds, at a time too when other vegetable food might be had in abundance. It appears to be eaten by very few or no Inſects.

The dried ſtems or kexes are uſed by Boys for various purpoſes.

The *Hemlock* is obviouſly diſtinguiſhed from our other umbelliferous plants, by its *large* and *ſpotted ſtalk*, by the *dark* and *ſhining green colour of its bottom leaves*, and particularly by their *diſagreeable ſmell* when bruiſed, and which according to Dr. STÖRCK reſembles that of Mice. The *Fool's Parſley* and *Scandix with rough ſeeds* are the moſt likely to be miſtaken for this poiſonous plant, but may eaſily be diſtinguiſhed if attention be paid to the deſcriptions and figures we have already given of them.

SENECIO VULGARIS. GROUNDSEL.

SENECIO VULGARIS. GROUNDSEL.

SENECIO *Linnæi Gen. Pl.* SYNGENESIA POLYGAMIA SUPERFLUA. *Receptaculum* nudum. *Pappus* ſimplex. *Calyx* cylindricus, calyculatus; *ſquamis apice ſphacelatis.*

Raii Syn. HERBÆ FLORE COMPOSITO, SEMINE PAPPOSO NON LACTESCENTES, FLORE DISCOIDE.

SENECIO *vulgaris* corollis nudis, foliis pinnato-ſinuatis amplexicaulibus, floribus ſparſis. *Lynn. Syſt. Vegetab. p.* 630. *Sp. Pl.* 1216. *Fl. Suecic. p.* 290.

SENECIO corollis nudis, foliis pinnato-ſinuatis amplexicaulibus, floribus ſparſis. *Haller hiſt. n.* 58.

SENECIO *vulgaris. Scopoli Fl. Carniol. p.* 162. *n.* 1063. *Hudſon Fl. Angl. p.* 315.

SENECIO minor vulgaris. *Bauhin Pin.* 181.

SENECIO *vulgaris. Parkinſon* 671.

ERIGERON *Gerard. emac.* 278. *Raii Syn. p.* 178. Common Groundſel or Simſon.

RADIX annua, e plurimis fibrillis albidis conſtans.

CAULIS ſimplex, erectus, pedalis, ramoſus, ſæpe purpureus, ſubanguloſus, in junioribus plantis verſus apicem ſubtomentoſus.

FOLIA obſcure virentia, glabra, amplexicaulia, pinnato-ſinuata, pinnis acute dentatis.

PEDUNCULI ſtriati, uniflori, primum erecti, peracta floreſcentiâ penduli, demum erecti.

CALYX: *communis* primum cylindraceus, demum conicus; *Squamis* ſubulatis, plurimis, in cylindrum ſuperne contractis parallelis, contiguis, æqualibus, paucioribus baſin imbricatim tegentibus, apicibus omnium nigricantibus, *fig.* 1.

COROLLA *Compoſita*, longitudine calycis; *Corollulæ* hermaphroditæ, tubuloſæ, numeroſæ in diſco, infundibuliformes; *limbo* reflexo, quinquefido: Radio nullo, *fig.* 2, 3.

STAMINA: FILAMENTA quinque, capillaria, minima; ANTHERA cylindracea, tubuloſa.

PISTILLUM: GERMEN ovatum; STYLUS filiformis, longitudine ſtaminum; STIGMATA duo oblonga, revoluta.

SEMEN oblongum, ſtriatum, fuſcum; PAPPUS ſimplex, albus, ſemine triplo fere longior, *fig.* 4; RECEPTACULUM nudum, ſcabrum.

ROOT annual, conſiſting of numerous white fibres.

STALK ſingle, upright, about a foot high, branched, often purple, ſlightly angular, in the young plants, towards the top, thinly covered with down.

LEAVES of a deep and dull green colour, ſmooth, embracing the ſtalk, pinnato-ſinuated, the pinnæ ſharply indented.

PEDUNCLES ſtriated, ſupporting one flower on each, at firſt upright, when the flowering is over they become pendulous, and laſtly upright.

CALYX: the *common* Calyx firſt cylindrical, and laſtly conical; the *Squamæ* ſubulate, numerous, contracted above into a Cylinder, parallel, contiguous and equal; thoſe at the baſe of the Calyx fewer, lying one over another, the tips of all of them blackiſh, *fig.* 1.

COROLLÆ *Compound*, the length of the Calyx; the *Florets* hermaphrodite, tubular and numerous in the diſk or middle, funnel-ſhaped, the *limb* reflex and divided into five ſegments: the Radius wanting, *fig.* 2, 3.

STAMINA: FILAMENTS five, capillary, and very minute: ANTHERÆ united into a tube.

PISTILLUM: GERMEN oval; STYLE filiform the length of the Stamina; STIGMATA two, oblong, and bent back.

SEED oblong, ſtriated and brown; the PAPPUS ſimple, white, almoſt three times the length of the ſeed, *fig.* 4; RECEPTACLE naked, and rough.

The Groundſel is a Plant which is well known to grow exceedingly common in Gardens, cultivated Ground, and on Walls, flowering all the year, if the weather be mild.

Although it is ſcarcely uſed at preſent as a Medicine, yet according to ſome Authors it is not without conſiderable virtues: the juice, or decoction of it, taken internally, operates gently by vomit; and the plant, externally applied, is ſaid to be uſeful in inflamed Breaſts, the Scrophula, and other Inflammations.

Mr. RAY ſuſpects that it might be given with advantage in Worms, as Farriers and Horſe-dealers give the juice of it to Horſes that are troubled with thoſe kind of Worms called *Bottes*, and to which it is preſently fatal.

Birds of various kinds are fond of the ſeeds and tops of this Plant; and a great variety of *Caterpillers*, particularly thoſe of the *Phalæna Jacobæa*, eat it readily.



Senecio vulgaris.



Hedera Helix.

1 2 3 4 5 6

HEDERA HELIX. IVY.

HEDERA *Linnæi Gen. Pl.* PENTANDRIA MONOGYNIA. *Petala* quinque oblonga. *Bacca* quinquesperma calyce cincta.

Raii Syn. ARBORES ET FRUTICES FRUCTU FLORI PETALOIDI CONTIGUO.

HEDERA *Helix* foliis ovatis lobatisque. *Lynn. Syst. Vegetab. p.* 202. *Sp. Pl.* 292. *Fl. Suecic. p.* 75.
HEDERA foliis sterilibus trilobatis, fructiferis ovato-lanceolatis. *Haller hist. helv. n.* 826.
HEDERA *Helix. Scopoli Fl. Carniol. n.* 271. *Hudson Fl. Angl. p.* 85.
HEDERA arborea. *Bauhin. Pin.* 305.
HEDERA poetica. *Bauhin. Pin.* 305.
HEDERA major sterilis. *Bauhin. Pin.* 305.
HEDERA humi repens. *Bauhin. Pin.* 305.
HEDERA arborea sive scandens et corymbosa communis. *Parkinson* 678.
HEDERA *Helix Ger. Em.* 858. *Raii Syn.* 459. Climbing or Berried Ivy: also Barren or Creeping Ivy.

TRUNCUS in arboribus hujus speciei senescentibus cortice rimoso cinereo vestitur, in novellis ramis viridis aut purpureus cernitur, fibrillas e latere interiori exerit, quorum ope proximis arboribus aut parietibus innixus alta petit.

TRUNK: the trunk in trees of this species, which are old, is covered with an ash-coloured chopped bark; in the young branches it is of a green or purple colour; from the inside of the trunk a great number of small fibres are thrown out, by the assistance of which it supports itself on the nearest walls and trees, and climbs aloft.

FOLIA quam maxime varia, dum planta repit plerumque trilobata, quinquelobata etiam occurrunt; adminiculis derelictis, ovata fiunt; glabra, nitentia, nunc rubedine ornata, nunc venis albis picta, presertim in ramulis junioribus.

LEAVES as various as possible; while the plant creeps they are in general trilobate, sometimes quinquelobate, leaving its supporters, they become oval; smooth, shining, sometimes tinctured with red, sometimes painted with white veins, particularly in the young branches.

FLORES lutescentes, in summitatibus caulium umbellatim dispositi, UMBELLÆ densæ, globosæ.

FLOWERS yellowish, growing on the top of the stalks in thick round UMBELS.

COROLLA: quinque, ovata, flavescentia, patentia.

COROLLA: PETALS five, oval, yellowish and spreading.

STAMINA: FILAMENTA quinque longitudine Corollæ; ANTHERÆ basi bifidæ, incumbentes, *fig.* 1.

STAMINA: five FILAMENTS the length of the Corolla; ANTHERÆ bifid at bottom, and incumbent, *fig.* 1.

PISTILLUM: GERMEN turbinatum; STYLUS simplex, brevissimus: STIGMA simplex, *fig.* 2.

PISTILLUM: GERMEN roundish; STYLE simple and very short; STIGMA simple, *fig.* 2.

PERICARPIUM: BACCA globosa, nigra, intus purpurea, quadrilocularis aut quinquelocularis, coronata receptaculo et stylo conico brevi, loculis monospermis, *fig.* 3, 4.

SEED-VESSEL: a round BERRY, externally black, internally purple, with four or five cavities, each containing one seed, crowned with the receptacle and short conic Style, *fig.* 3, 4.

SEMINA quinque, hinc gibba, inde angulata, *fig.* 6.

SEEDS five, on one side gibbous, on the other angular, *fig.* 6.

The Hedera Helix begins to blow in sunny aspects towards the end of September, and according to situation blossoms on through October and November. This plant is one of the last blowers, and is much resorted to by bees, and flies of various species, which swarm on its branches, and feed on its blossoms, making such a humming on sunny days as may be distinguished at a considerable distance.

The berries increase in bulk gradually all through the winter months, and are full formed by February; in April they ripen and turn very black, and are eaten by several species of thrushes, and wild pigeons. Thus does fructification manifestly obtain in this instance all through the winter months, as well as in the mosses and lichens.

Sheep are very fond of Ivy, which in hard weather is a warm and wholsome food; and therefore shepherds in snowy seasons cut down branches for their flocks to brouze on. CATO directs that in a scarcity of hay cattle should be foddered with Ivy.

Professor KALM, in his travels through the greatest part of N. America, saw but one plant of Ivy, and that was running up the walls of a man's house: this specimen was probably carried thither by some European, who, perhaps, was desirous of propagating in that new world a plant that might still recall to his mind the pleasing idea of his native cottage, tufted with the foliage of this beautiful Evergreen.

The Ancients held this plant in great esteem; their Heroes and Poets are described as wearing garlands composed of it. The supposition of its preventing intoxication is of very early date: Homer therefore mentions his Bacchus as Ivy-crowned, and often describes his Heroes drinking out of a Cup made of the wood of Ivy (κισσυβιον). CATO tells us that with a cup of this kind we may distinguish wine that has been adulterated with water, for the wine will be discharged and the water remain: to such an extravagant assertion has this grave Author been probably led by relying on the supposed antipathy between the vine and ivy: This cup is still used in some parts of the kingdom as a remedy for a trembling hand; but rational practice has not admitted any part of the Hedera into the Materia Medica; Ivy-leaves however are said to be successfully applied to painful Corns. When it trails on the ground its branches are small and weak; and its leaves are divided into three lobes; but when it climbs walls or trees it grows much stronger, and the leaf changes to an oval form: these different appearances induced old Botanists to suppose there were two or three different species. In its variegated state it sometimes appears almost white, and may perhaps be the *Hedera alba* and *pallentes Hederæ* of VIRGIL.

Few people are acquainted with the beauty of Ivy when suffered to run up a stake, and at length to form itself into a standard; the singular complication of its branches, and the vivid hue of its leaves give it one of the first places amongst evergreens in a shrubbery; in woods, when suffered to grow large and rampant, this plant, by twining round their bodies, does great damage to timber trees, and therefore should be carefully destroyed: but in ornamented Outlets, where evergreens do not abound, a few trees covered with Ivy have a very pleasing effect, and moreover induce birds of song to haunt those thickets for the sake of the berries and shelter.

In the Stump of Ivy many birds build their Nests, particularly the Black bird.

When Ivy is prejudicial, it may easily be destroyed, though it has spread to a great height, by cutting through its Trunk, and this shews that the fibres which the Stalk throws out in so singular a manner serve more to support than nourish it.

The soft wood of Ivy is made use of by Shoemakers to give a smooth edge to their cutting knives.

LAMIUM PURPUREUM. RED LAMIUM OR DEAD NETTLE.

LAMIUM *Linnæi Gen. Pl.* DIDYNAMIA GYMNOSPERMIA. *Corollæ* labium ſuperius integrum, fornicatum, labium inferius bilobum; faux utrinque margine dentata. *Lin. Deſcrip. Gen. abbrev.* *Raii Syn. Gen.* 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

LAMIUM *purpureum* foliis cordatis obtuſis petiolatis. *Linn. Syſt. Vegetab. p.* 446. *Sp. Pl.* 809. *Fl. Suecic.* 203.

LAMIUM foliis cordatis, obtuſis, in ſummo ramo congeſtis. *Haller hiſt. v.* 1. 118.

LAMIUM *purpureum. Scopoli Fl. Carniol. p.* 407. *n.* 701.

LAMIUM purpureum fætidum, folio ſubrotundo, ſive Galeopſis Dioſcoridis. *Bauhin. pin.* 230. *Lamium rubrum. Gerard. emac.* 703. *Parkinſon.* 604. *Raii Synopſis* Small Dead Nettle or red Archangel 240. *Hudſon. Fl. Angl.* 225. *Oeder. Fl. Dan. icon.* 523.

RADIX annua, fibroſa.

CAULES plures, ad baſin debiles, et ramoſi, prope ſummitatem fere nudi, et ſæpe colorati, ſemi-pedales, quadrangulares, fiſtuloſi, ſcrabiuſculi.

FOLIA oppoſita, venoſa, hirſutula, inferiora ſubrotundo-cordata, crenata, longe petiolata: ſuperiora ovato-cordata, obtuſe ſerrata, petiolis brevibus inſidentia, alterne oppoſita, reflexa, denſe et imbricatim congeſta, et rubedine tincta.

FLORES purpurei, in ſummis caulibus verticillatim denſius ſtipati. Verticilli multiflori.

CALYX: PERIANTHIUM monophyllum, tubulatum, ſuperne patentius, quinquedentatum, ſubſtriatum, hirſutulum, dentibus ſubæqualibus, acuminatis. *fig.* 1.

COROLLA monopetala, ringens, pallide purpurea, *fig.* 2; TUBUS brevis, cylindraceus, *fig.* 6; FAUX inflata, margine utroque bidentata, *fig.* 4; denticulo ſuperiori ſpinæ ſimili, inferiore obtuſiore, maeulâ notata; labium ſuperius, *fig.* 3, ovatum, concavum, villoſulum, integrum, labium inferius bilobum, maculatum, lobis patentibus, *fig.* 5.

STAMINA: FILAMENTA quatuor, ſubulata, alba, ſub labio ſuperiori tecta, quorum duo longiora, *fig.* 7; ANTHERÆ oblongæ, barbatæ, polline croceo repletæ. *fig.* 8.

PISTILLUM: GERMEN quadrifidum; STYLUS filiformis, longitudine et ſitu ſtaminum; STIGMA bifidum, acutum, *fig.* 9, 10, 11.

SEMINA 4 in fundo calycis, pallida, triangularia, apice truncata, marginata, *fig.* 12.

ROOT annual and fibrous.

STALKS ſeveral, at bottom weak and branched, near the top almoſt naked, and frequently coloured, ſix inches or more in height, quadrangular, hollow, and ſlightly rough.

LEAVES oppoſite, veiny, ſlightly hairy, the lower ones of a roundiſh-heart-ſhaped form, notched, and placed on footſtalks, the uppermoſt ones oval-heart-ſhaped, obtuſely ſerrated, with ſhort footſtalks, alternately oppoſite, growing thickly together, bent back and laying one over another, of a reddiſh colour,

FLOWERS purple, growing thickly together on the tops of the ſtalks in whirls; many flowers in each whirl.

CALYX: a PERIANTHIUM of one leaf, tubular, at top ſpreading, with five teeth, ſomewhat ſtriated and hairy, the teeth nearly equal and long pointed, *fig.* 1.

COROLLA monopetalous, gaping, of a pale purple colour, *fig.* 2; the TUBE ſhort and cylindrical, *fig.* 6; the ENTRANCE OF THE TUBE inflated, the margin on each ſide furniſhed with two teeth, *fig.* 4; the uppermoſt pointed like a thorn, the lowermoſt blunter with a ſpot on it; the upper lip, *fig.* 3, oval, hollow, ſlightly villous, entire, the under lip divided into two lobes, ſpreading a little from one another, and ſpotted, *fig.* 5.

STAMINA: four FILAMENTS, tapering and white, hid under the upper lip, two of which are longer than the reſt, *fig.* 7; the ANTHERÆ oblong, bearded, and full of a yellow pollen, *fig.* 8.

PISTILLUM: GERMEN quadrifid; STYLUS filiform, the length of the Stamina; STIGMA bifid and pointed, *fig.* 9, 10, 11.

SEEDS 4 in the bottom of the Calyx, of a pale brown, triangular, cut off as it were at top, with a margin round them, *fig.* 12.

Although this Plant may perhaps with propriety be conſidered as a Weed in Gardens, yet the bright colour of its tops and flowers, joined to its early appearance, contributes not a little to ornament our banks in the Spring, when few other plants appear in bloſſom.

The Flowers are moſt commonly of a bright red colour, ſometimes white, and are much reſorted to by Bees of various kinds.

The Leaves and Flowers are thoſe parts of the Plant which are uſed in Medicine, although in the preſent practice they are ſcarce regarded.

According to LINNÆUS, it is boiled in *Upland*, a Province of *Sweden*, as a pot herb. A variety of this Plant occurs not unfrequently about Town, which has its leaves more deeply indented. RAY calls it *Lamium rubrum minus, foliis profunde inciſis.* I have found it growing on a bank on the right hand ſide of the way between *Pimlico* and *Chelſea.*



Lamium purpureum.



Bryum hornum.

BRYUM HORNUM. SWANS-NECK BRYUM.

MNIUM *Linnæi Gen. Pl.* CRYPTOGAMIA MUSCI. Maſculus flos pudunculatus. Femineus flos in diſtincto ſæpius individuo.

Raii Synopſis Gen. 3. MUSCI.

MNIUM *hornum* antheris pendulis, pedunculo curvato, ſurculo ſimplici, foliolis margine ſcabris. *Linnæi Syſt. Vegetab. p.* 796.

BRYUM *hornum* ſurculo capitulifero ramoſiuſculo: ſtellifero ſimplici, primordialibus plumuloſis. *Necker. Method. Muſc. p.* 215.

MNIUM foliis lanceolatis, imbricatis, capſulis pendulis cylindricis obtuſis. *Haller. hiſt. helv.* 3. *p.* 54.

MNIUM *hornum* ſerratifolium. *Weis Cryptogam.* 149.

BRYUM antheris oblongis nutantibus pedunculo curvato, foliolis ovatis, margine ſcabris. *Hudſon. Fl. Angl. p.* 415.

BRYUM ſtellare hornum ſylvarum, Capſulis magnis nutantibus. *Dillen. Muſc.* 402.

BRYUM nitidum capitulis majoribus reflexis, calyptra imum vergente, pediculis oblongis e cauliculis novis egredientibus. *Raii Syn. p.* 102. 51.

Ad majores accedit hæc ſpecies.

CAULES unciales aut biunciales, radiculis ferrugineis, valde tomentoſis inſtructi, erecti, plerumque ramoſi, pedunculiferi et ſtelliferi, ad baſin rubicundi, STELLULÆ et PEDUNCULI, nunc ſeorſim, nunc ex eadem radice proveniunt, unuſque aut plures Surculi e baſi caulis ſemper fere naſcuntur.

FOLIA ſaturate viridia, ovato-lanceolata, ſuberecta, pellucida, ad lentem *minute ſerrata, fig.* 1.; nervo medio diſtincto et in mucronem brevem educto, in ſurculis fœmineis dictis apice ſtellatim expanſa, et paulo latiora, in junioribus anguſtiora et cauli magis adpreſſa.

PEDUNCULI terminales, biunciales, rubræ, verſus apicem ut recte obſervavit DILLENIUS inſtar *colli olorini* incurvati.

CAPSULÆ *oblongæ*, tumidæ, virides, nutantes, lente auctæ, *fig.* 7.; per longitudinem ſectæ ut RECEPTACULUM conſpiciatur, *fig.* 9.; CALYPTRA longa, acuminata, caduca, *fig.* 6.; OPERCULUM breve, flaveſcens, *fig.* 8.; ORA ciliata.

This ſpecies comes near to the largeſt ſize.

STALKS from one to two inches in height, furniſhed with roots which are of a ferruginous colour, and covered with a kind of woolly ſubſtance, upright and generally branched, reddiſh at bottom, producing both PEDUNCULI and STELLULÆ, which proceed ſometimes from the ſame, ſometimes from different roots, and one or ſeveral Surculi uſually ſpring from the bottom of the ſtalk.

LEAVES of a deep green colour, of an oval pointed ſhape, nearly upright, pellucid, when viewed with a glaſs *finely ſerrated at the edges, fig.* 1.; the midrib diſtinct, and terminating in a ſhort point, on the tops of thoſe ſtalk, which are conſidered as female, they are expanded like a little ſtar and ſomewhat broader, in the young ſhoots they are narrower and preſſed cloſer to the ſtalk.

PEDUNCLES ſpringing from the ſummit of the ſtalks, about two inches in height, bent near the top like a *Swan's Neck*, as DILLENIUS has properly obſerved.

CAPSULES *oblong*, tumid, of a green colour and drooping, magnified, *fig.* 7.; cut longitudinally through the middle that the RECEPTACULUM may be ſeen, *fig.* 9.; the CALYPTRA ong, pointed, and ſoon falling off, *fig.* 6.; the OPERCULUM ſhort, of a yellowiſh colour, *fig.* 8.; the MOUTH of the Capſule ciliated.

On examining with a microſcope the tops of thoſe ſtalks which are called *Stellulæ Fæmineæ, fig.* 2. and which are conſidered by many as the female parts of the fructification in this Moſs, there appeared, in the center of the *Stellula*, a great number of ſmall upright bodies, or Corpuſcles, of two kinds, *fig.* 3. the one white, pellucid, and jointed; the other of a greener colour, ſhorter, and of an oblong oval ſhape, vid. *fig.* 4, 5. They do not appear to me to have any thing in their ſtructure in the leaſt ſimilar to any of the parts of fructification in plants; what their real ſtructure and uſes are, may perhaps be diſcovered by future obſervations.

This ſpecies occurs not unfrequently on moiſt banks in Woods, as in *Charlton* Wood, and the Woods about *Hampſtead.* producing its fructifications in February and March.

As the *Capitula Pulverulenta* of DILLENIUS, or *Sphæropoylli*, as they are called by NECKER, are entirely wanting in this Moſs, and as the exiſtence of thoſe ſingular little heads ſeems very obviouſly to diſtinguiſh the Genus *Mnium*, I have choſen rather to arrange it with DILLENIUS and HUDSON among the *Bryums*, than with LINNÆUS among the *Mniums*; for if we make *Mniums* of all the Moſſes which have *Stellulæ*, we ſhall involve ourſelves in conſiderable difficulties. Many of thoſe *Stellulæ* are indeed very obvious, as in the preſent one; but in others they are very obſcure, ſo that it is difficult to ſay whether they exiſt in them or not; but if they were obviouſly to be diſtinguiſhed, there is not the leaſt likeneſs between a *Stellula* and *Sphærophyllum*: why then unite in one Genus plants which have ſuch very different appearances? Would it not be better to conſider the Moſſes which produce *Sphærophylli*, or *little balls* as *Mniums*, according to DILLENIUS, and divide the *Bryums*, if neceſſary, into two families, viz. ſuch as have obvious *Stellulæ*, and ſuch as have *none?*

The name of *Rough Bryum*, which Mr. HUDSON ſeems to have given to this Moſs for brevity's ſake, conveys an idea with which this *Bryum* does not ſeem perfectly to correſpond, it having no *roughneſs* except at the edges of the leaves, which are minutely ſerrated: I have therefore adopted DILLENIUS's name of *Swan's Neck Bryum*, as being juſtifiable from the ſingular ſhape of the Peduncles, and being more likely to be remembered from its ſtriking analogy.

CALTHA PALUSTRIS. MARSH-MARIGOLD.

CALTHA *Linnæi Gen. Pl.* POLYANDRIA POLYGYNIA. *Cal.* o. Petala quinque. Nectaria o. *Capſulæ* plures polyſpermæ.

Raii Syn. HERBÆ MULTISILIQUÆ SEU CORNICULATÆ.

CALTHA paluſtris. *Linnæi Syſt. Vegetab. p.* 432. *Flor. Suecic.* 198.

CALTHA. *Haller. hiſt. helv. p.* 32. *n.* 1188.

POPULAGO *paluſtris. Scopoli Fl. Carniol. p.* 404.

CALTHA paluſtris flore ſimplici. *Bauhin. pin.* 276.

POPULAGO. *Tournefort. Tabernamont.*

CALTHA paluſtris vulgaris ſimplex. *Parkinſon.* 1213.

CALTHA paluſtris major. *Gerard. emac.* 817.

Raii Syn. 272. Marſh Marigold. *Hudſon Fl. Angl. p.* 214.

RADIX perennis, e plurimis fibris, teretibus, majuſculis, albidis, conſtans.

CAULES ex eadem radice naſcuntur plures, ſuberecti, pedales, fiſtuloſi, pene teretes, glabri, ramoſi, ad baſin purpurei.

FOLIA *radicalia* petiolata, cordato-reniformia, glabra, crenata, *caulina* ſubſeſſilia, ad apicem acutiora, et acute crenata.

STIPULÆ fuſcæ, membranaceæ, mareſcentes.

RAMI dichotomi.

PEDUNCULI uniflori, erecti, ſulcati.

CALYX nullus.

COROLLA: PETALA plerumque quinque, flava, magna, ſubrotundo-ovata, plana, patentia, ſuperne non ſplendentia, *fig.* 1.

STAMINA: FILAMENTA numeroſa, filiformia, Corollâ breviora, ANTHERÆ oblongæ, compreſſæ, incurvatæ, flavæ, *fig.* 2.

PISTILLUM: GERMINA quinque ad decem, oblonga, compreſſa, erecta; STYLI nulli; STIGMATA ſimplicia, *fig.* 3.

PERICARPIUM: CAPSULÆ totidem, acuminatæ, patentes, futurâ ſuperiore dehiſcentes, *fig.* 4.

SEMINA plurima, ſubovata, pulchra, inferne olivacea, ſuperne rufa, *fig.* 5.

ROOT perennial, conſiſting of numerous, round, large, white fibres.

STALKS: ſeveral ariſe from the ſame root, almoſt upright, about a foot high, hollow, nearly round, ſmooth, branched, and purple at bottom.

LEAVES: the *radical* leaves placed on long foot-ſtalks, betwixt an heart and kidney ſhape, ſmooth, ſhining, and notched or crenated; the leaves of the STALK nearly ſeſſile, more pointed at top, and ſharply crenated.

STIPULÆ brown, membranous, and withered.

BRANCHES dichotomous.

PEDUNCLES ſupporting one flower, upright, and grooved.

CALYX wanting.

COROLLA generally conſiſts of five large PETALS of a roundiſh oval ſhape and yellow colour, flat, ſpreading, and without any gloſs on the upper ſide, *fig.* 1.

STAMINA: FILAMENTS numerous, filiform, ſhorter than the Corolla; ANTHERÆ oblong, flat, bending inward, and of a yellow colour, *fig.* 2.

PISTILLUM: GERMINA from five to ten, oblong, flattiſh, and upright; STYLES none; STIGMATA ſimple, *fig.* 3.

SEED-VESSEL: ſo many CAPSULES as Germina, pointed, and ſpreading, opening at the ſuperior future, *fig.* 4.

SEEDS numerous, ſomewhat oval, beautiful, at bottom of an olive, and at top of a reddiſh colour.

LINNÆUS informs us, that the *Caltha* is the firſt flower which proclaims the Spring in *Lapland*, and that it begins to blow about the end of May: with us it uſually flowers in March and April; and laſt Spring, 1775, this plant was found in Bloſſom in the month of February, ſo remaakably forward was the Spring of that year.

It grows in wet Meadows and by the ſides of Rivers, where it makes a very noble appearance, and, when double, is often cultivated in Gardens, where it will grow very readily, if the ſoil be favourable.

In the Country, Children collect it to ornament their Garlands on May-day.

I ſcarce ever obſerved the leaves to be eaten by any animals; but the flowers are often deſtroyed by a ſpecies of CHRYSOMELA.

HALLER ſays, that it is acrid and cauſtic, and yet that is eaten by Cows.

The flower buds are pickled, and uſed as Capers.



Caltha palustris.



Ervum hirsutum.

ERVUM HIRSUTUM. ROUGH-PODDED TINE-TARE.

ERVUM *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA. Calyx quinquepartitus, longitudine corollæ. *Raii Gen.* 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

ERVUM *hirſutum*, pedunculis multifloris, ſeminibus globoſis binis. *Linn. Syſt. Vegetab. p.* 554. *Spec. Plant.* 1039. *Fl. Suecic. p.* 255.

VICIA foliis linearibus, ſiliquis racemoſis, diſpermis, hirſutis. *Haller. Hiſt. helv. n.* 422.

ERVUM *hirſutum*. *Scopoli Fl. Carniol. n.* 901. *Hudſon. Fl. Angl. p.* 280.

VICIA ſegetum cum ſiliquis plurimis hirſutis. *Bauhin. Pin. p.* 345.

VICIA ſylveſtris ſeu Cracca minima. *Gerard. emac.* 1028.

ARACHUS ſive Cracca minor. *Parkinſon*, 1070. *Raii Syn.* ſmall wild Tare or Tine-Tare. *Muller. Flor. Dan. icon.* 639.

RADIX annua, tenuis, prælonga, paucis fibrillis inſtructa.

CAULES pedales, aut bipedales, debiles, ramoſi, quadrangulares, tortuoſi.

STIPULÆ in plures lacinias tenues diviſæ, ſuperiore majore.

FOLIA pinnata, ad octo aut duodecem paria, oppoſita, aut ſubalterna, lævia, lanceolata, *apice truncata, nervo medio in mucronem educto*, capreolo ramoſo terminata.

PEDUNCULI longitudine foliorum, *multiflori*.

FLORES a tribus ad octo, pallide purpurei, racematim, et imbricatim diſpoſiti.

CALYX: PERIANTHIUM quinquedentatum, perſiſtens, longitudine fere Corollæ, dentibus linearibus, acuminatis, ſubæqualibus, duobus ſuperioribus more Orobi obtuſe diviſis, *fig.* 1.

COROLLA papilionacea; VEXILLUM ſubrotundum, vix emarginatum, parum reflexum, *fig.* 2; ALÆ Carinæ adhærentes, ovatæ, obtuſæ, ad baſin lineares, *fig.* 3; CARINA alis brevior, *fig.* 4, *interne maculâ purpurea utrinque notata.*

STAMINA: FILAMENTA decem aſſurgentia, ſupremum brevior cæteris, nec liberum, *fig.* 5; ANTHERÆ ſimplices, flavæ.

PISTILLUM: GERMEN oblongum, STYLUS ſimplex, aſſurgens, STIGMA obtuſum, villoſum, *fig.* 6.

PERICARPIUM: LEGUMEN breve, *hirſutum, diſpermum*, *fig.* 7.

SEMINA duo, ſubrotunda.

ROOT annual, ſlender, long, and furniſhed with few fibres.

STALKS from one to two feet high, weak, branched, quadrangular and twiſted.

STIPULÆ divided into many ſlender laciniæ, of which the uppermoſt is the largeſt.

LEAVES pinnated, from eight to twelve pair, oppoſite, or nearly alternate, ſmooth, lanceolate, with the *top cut off*, and the *midrib running out to a ſhort point*, terminated by a branched tendril.

PEDUNCLES the length of the leaves, and ſupporting many flowers.

FLOWERS from three to eight, of a pale purple colour, diſpoſed in racemi, and lying one over another.

CALYX: a PERIANTAIUM with five teeth, continuing, almoſt the length of the Corolla, the teeth linear, and pointed, nearly equal, the two upper ones obtuſely divided in the manner of the Orobus, *fig.* 1.

COROLLA papilionaceous; the VEXILLUM roundiſh; ſcarcely nicked in, bending a little back, *fig.* 2, the WINGS adhering to the Carina, oval, obtuſe, at bottom linear, *fig.* 3; the CARINA ſhorter than the Wings, *fig.* 4, *marked internally on each ſide with a purple ſpot.*

STAMINA: ten FILAMENTS which riſe upward, the uppermoſt connected with, and ſhorter than the others, *fig.* 5; the ANTHERÆ ſimple and yellow.

PISTILLUM: GERMEN oblong, STYLE ſimple and riſing upward, STIGMA blunt and villous, *fig.* 6.

SEED-VESSEL: a ſhort *hairy* LEGUMEN with *two ſeeds*, *fig.* 7.

SEEDS two, and roundiſh.

This ſpecies of Tine-Tare, which at firſt ſight bears ſo great a reſemblance to the *Ervum Tetraſpermum*, grows like that too frequently among Corn, to which it is in general more deſtructive, as being a ſtronger and more prolific plant. I have in wet ſeaſons ſeen whole fields of corn overpowered and wholly deſtroyed by this plant.

It is eaſily diſtinguiſhed from the *Tetraſpermum*. In the firſt place, the leaves are not pointed as in that ſpecies, but appear as if cut off at the end, which, although a material circumſtance, is not noticed by MULLER in his figure of it, *vid. Fl. Dan. Icon.* 639; ſecondly, the Stipulæ are divided into many more laciniæ; the flowers, and conſequently the pods, grow in a kind of cluſter, whereas there are ſeldom more than two grow together in the *Tetraſpermum*; and, laſtly, which ſeems to be the beſt diſtinction, the pods are rough, and contain two ſeeds in each; while in the *Tetraſpermum* they are ſmooth, and contain four ſeeds.

SAXIFRAGA GRANULATA. WHITE SAXIFRAGE.

SAXIFRAGA *Linnæi Gen. Pl.* DECANDRIA DIGYNIA.

Calyx quinquepartitus, *Corolla* pentapetala. *Capſula* biroſtris, unilocularis, polyſperma.

Raii Syn. HERBÆ PENTAPETALÆ VASCULIFERÆ.

SAXIFRAGA *granulata* foliis caulinis reniformibus lobatis, caule ramoſo, radice granulata. *Linnæi Syſt. Vegetab. p.* 344. *Fl. Suecic. n.* 372.

SAXIFRAGA foliis radicalibus reniformibus, obtuſe dentatis, caulinis palmatis. *Haller. hiſt. helv. n.* 976.

SAXIFRAGA rotundifolia alba. *Bauhin. Pin.* 309.

SAXIFRAGA alba. *Gerard emac.* 841.

SAXIFRAGA alba vulgaris. *Parkinſon.* 424. *Raii Syn.* 354. *Hudſon. Fl. Angl. p.* 159. *Oeder Flor. Dan.* 514.

RADIX. Fibris hujus radicis glomeratim adnaſcuntur plurimi bulbilli, extus rubeſcentes aut flaveſcentes, intus albidi, ſaporis primum adſtringentis, poſtea amari et ingrati.

ROOT. To the fibres of the root of this plant adhere in cluſters a number of ſmall bulbs, externally red or yellowiſh, internally white, of a taſte at firſt aſtringent, afterwards bitter and diſagreeable.

CAULIS plerumque ſimplex, pedalis, ſubramoſus, teres, hirſutus, preſertim ad baſin, parum folioſus.

STALK generally ſimple, about a foot high, a little branched, round, hirſute, particularly at bottom, furniſhed with but few leaves.

FOLIA *radicalia* petiolis longis, hirſutis, baſi latis inſidentia, reniformia, hirſutula, lobata, lobis obtuſis; *caulina* ſicut adſcendunt petiolis brevioribus gaudent donec tandem ſeſſilia fiunt, lobi foliorum acutiora evadunt, apicibus rufeſcentibus.

LEAVES *which grows next the root* placed on long hairy foot-ſtalks with a broad baſe, kidney-ſhaped, ſlightly hairy, divided into obtuſe lobes, thoſe of the *ſtalk*, as they aſcend, are furniſhed with ſhorter foot-ſtalks, 'till they gradually become ſeſſile, the lobes more acute, and the tips of a reddiſh colour.

CALYX: PERIANTHIUM quinquepartitum, hirſutulum, ſubviſcidum, laciniis ovato-acutis apice rufis, *fig.* 1.

CALYX: a PERIANTHIUM divided into five ſegments, hirſute and ſomewhat viſcid, the laciniæ of an oval pointed ſhape, and red at the tips, *fig.* 1.

COROLLA: PETALA quinque alba, patentia, apice rotundata, baſi anguſtiora et venis flaveſcentibus notata, *fig.* 2.

COROLLA: five PETALS, white, ſpreading, round at top, at bottom narrower, and ſtriped with yellowiſh veins, *fig.* 2.

STAMINA: FILAMENTA decem ſubulata; ANTHERÆ ovatæ, compreſſæ, inſidentes, flavæ, biloculares, quorum quinque Pollen primum emittunt, hinc longiores, *fig.* 3, 4.

STAMINA: ten FILAMENTS tapering; ANTHERÆ oval, flat, ſitting on the Filaments, yellow, bilocular, five of them ſhed the Pollen firſt, hence they become longer than the others, *fig.* 3, 4.

PISTILLUM: GERMEN ſubrotundum, inferum, glandulâ ſaturate viridi cinctum, *fig.* 7.; STYLI duo, Staminibus breviores, incurvati, *fig.* 5.; STIGMA concavum, *fig.* 5. demum expandens, *fig.* 6.

PISTILLUM: GERMEN roundiſh, placed below the Calyx, ſurrounded by a gland of a deep green colour, *fig.* 7.; STYLES two, ſhorter than the Stamina, bending inward, *fig.* 5.; STIGMA hollow, *fig.* 5. finally expanding, *fig.* 6.

PERICARPIUM: CAPSULA ſubovata, biroſtris, bilocularis, pallide fuſca, *fig.* 8.

SEED-VESSEL: a CAPSULE of a ſhape ſomewhat oval, and pale brown colour, having two beaks or orns, and two cavities, *fig.* 8.

SEMINA numeroſa, minutiſſima, nigra, *fig.* 9.

SEEDS numerous, very minute, and black, *fig.* 9.

The Root of this ſpecies of *Saxifrage*, by means of which it is chiefly propagated, affords the young Botaniſt a very good example of the *Radix granulata*, being compoſed of a number of little grains or bulbs, connected together in cluſters by the fibres; ſome of theſe bulbs are ſolid and entire, not unaptly reſembling in ſhape the bulbs of Onions; others ſpread open at top, and ſeem to be compoſed of a number of ſquamulæ or leſſer bulbs; theſe are often of a bright red colour. The upper part of the ſtalk, the foot-ſtalks of the flowers and calyx, are covered with a kind of hairs, which terminate in a viſcid globule, and which ſeem to accompany moſt of the plants of this Genus. The two Styles, which at firſt are ſhort, with a hollow Stigma, *fig.* 5. quickly grow much longer; the Stigmata ſpread open, ſo that they reſemble in ſome degree a pair of tea-tongs, *fig.* 6.

This plant does not occur ſo frequently with us as many others. According to Mr. HUDSON, it is common about *Wandſworth*. I have frequently gathered it in the fields about *Peckham*, and lately have found it in great abundance much nearer town, *viz.* in the fields called *Lock-fields*, on the right hand ſide of *Kent-ſtreet Road*, at the back of, and contiguous to, Mr. DRIVER's Nurſery Gardens. It delights to grow in dry paſtures which have a gravelly bottom; flowers in May, and produces its ſeeds in the month following. When double, it ſerves, with many other Britiſh plants, to ornament the gardens of the curious.

Like many other plants, this ſeems to owe what little importance it has in medicine to the doctrine of ſignatures, which has moſt unphiloſophically introduced a number of plants into our Materia Medica. As the root bore ſo great a reſemblance to little ſtones, it was concluded, it muſt be efficacious in the ſtone and gravel, for which diſeaſes it has been recommended; but there are no accounts of its ſucceſs to be depended on. If it does poſſeſs any medical virtue, it ſhould appear from the taſte of the root to be that of an aſtringent.



Saxifraga Granulata.

Kilburn Pinx.t et sculpt.



Dipsacus pilosus.

DIPSACUS PILOSUS. SMALL WILD TEASEL OR SHEPHERD'S ROD.

DIPSACUS *Linnæi Gen. Pl.* TETRANDRIA MONOGYNIA.

Calyx communis polyphyllus; proprius ſuperus. *Receptaculum* paleaceum.

Raii Syn. p. 191. HERBÆ CORYMBIFERIS AFFINES.

DIPSACUS *piloſus* foliis petiolatis appendiculatis. *Linn. Syſt. Vegetab. p.* 120. *Spec. Plant.* 141.

DIPSACUS foliis biauribus, capitulis hemiſphæricis. *Haller. hiſt. helv. No.* 199.

DIPSACUS ſylveſtris capitulo minore vel virga paſtoris minor. *Bauhin. Pin. p.* 385.

DIPSACUS minor ſeu Virga paſtoris. *Ger. emac.* 1168.

VIRGA PASTORIS. *Parkinſon* 984. *Raii Synop. p.* 192. *Hudſon. Fl. Angl. p.* 49.

RADIX biennis.

CAULIS orgyalis, erectus, ramoſiſſimus, pene teres, aculeatus, ſulcatus.

RAMI oppoſiti, patentes, cauli ſimiles.

FOLIA ad *baſin* CAULIS, connata, ovato-lanceolata, ſerrata, nervo medio ſubtus aculeato, *indiviſa*, *ſuprema* appendiculata; RAMORUM; *ima* appendiculata, ſerrata, *ſuprema* margine integerrima, lanceolata.

PEDUNCULI erecti, longi, ex dichotomiâ caulis, ſulcati, aculeati, apice ſpinoſiſſimi, uniflori.

FLORES albidi, in capitulum hemiſphæricum collecti, dum florent nutantes, poſtea capitula eriguntur.

CALYX: PERIANTHIUM *commune* multiflorum, hexaphyllum, foliolis longitudine florum, patentibus, lanceolatis, mucronatis, *fig.* 1.: PERIANTHIUM *proprium* parvum, ſuperum, concavum, ciliatum, *fig.* 5. lente auctum.

COROLLA *propria* monopetala, tubuloſa, limbo quadrifido, laciniâ inferiore longiore, *fig.* 3.

STAMINA: FILAMENTA quatuor Corollâ longiora; ANTHERÆ purpureæ, *fig.* 3.

PISTILLUM: GERMEN inferum, tetragonum; STYLUS filiformis, longitudine Corollæ; STIGMA ſimplex, *fig.* 6.

PERICARPIUM nullum.

SEMINA fuſca, ſubtetragona, *fig.* 4.

RECEPTACULUM commune hemiſphæricum, paleaceum, pars inferior palearum concava, alba, carinata, ſuperior lanceolata, acuminata, ſpinulis obſita, *fig.* 2.

ROOT biennial.

STALK about ſix feet high, upright, very much branched, nearly round, prickly, and grooved.

BRANCHES oppoſite, ſpreading, like the ſtalk.

LEAVES *at the bottom of the* STALK connate, ovato-lanceolate, ſerrated, the midrib prickly underneath, *undivided*, thoſe at the *top* dividing at the baſe into two ſmaller leaves; the leaves on *the branches* at *bottom* ſimilar to thoſe laſt deſcribed, at *top* lanceolate, with the edges entire.

FOOT-STALKS of the flowers, upright, long, proceeding from the middle where the ſtalks ſeparate, grooved, prickly, at top very full of ſlender ſpines, ſupporting one flower.

FLOWERS whitiſh, collected together in a ſmall hemiſpherical head, which, while the plant is in flower, droops, and afterwards becomes upright.

CALYX: the *common* PERIANTHIUM ſupporting many flowers, compoſed of ſix leaves, the length of the flowers, ſpreading, lanceolate and pointed, *fig.* 1. The PERIANTHIUM of *each floſcule* ſmall, placed above the Germen, hollow, and ciliated, *fig.* 5. magnified.

COROLLA: *each floſcule* monopetalous, tubular, the limb quadrifid, the lowermoſt ſegment longeſt, *fig.* 3.

STAMINA: four FILAMENTS, longer than the Corolla; ANTHERÆ purple, *fig.* 3.

PISTILLUM: GERMEN placed below the Calyx, quadrangular; the STYLE filiform, the length of Corolla; the STIGMA ſimple, *fig.* 6.

SEED-VESSEL wanting.

SEEDS brown, nearly quadrangular.

RECEPTACLE common to all the flowers paleaceous: the lower part of the paleæ hollow, white, and angular behind; the upper part lanceolate, tapering to a point, and beſet with little ſpines or hairs, *fig* 2.

This ſpecies of *Teaſel* may be conſidered as one of our Plantæ rariores. Hitherto I have found it only in one place near town, *viz.* on the right-hand ſide of the Turnpike-road leading from *Deptford* to *Lewiſham*, not far from the latter. As it grows to a conſiderable height, it is conſpicuous at a diſtance. The flowers appear in July, and the ſeed is ripe in September. It continues to blow for a conſiderable time; and, did not the plant take up ſo much room, there is beauty enough in its flowers to recommend it for the Garden.

Moths ſeem very fond of its bloſſoms, being found on them in great numbers after ſun-ſet.

ANTHOXANTHUM ODORATUM. SWEET-SCENTED OR VERNAL GRASS.

ANTHOXANTHUM *Linnæi Gen. Pl.* DIANDRIA DIGYNIA.
Calyx. Gluma bivalvis, uniflora. *Corolla.* Gluma bivalvis, acuminata. *Semen* unicum.

Raii Synop. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

ANTHOXANTHUM *odoratum* ſpica oblonga, ovata, laxa.
ANTHOXANTHUM *odoratum* ſpica oblonga, ovata, floſculis ſubpedunculatis ariſta longioribus, *Linnæi Syſt. Vegetab. p.* 67. *Fl. Suecic. No.* 33.
AVENA diantha, folliculo villoſo, calycis glumis inæqualibus, altera de imo dorſo, altera de ſummo ariſtata. *Haller. hiſt. helv. No.* 1491.
ANTHOXANTHUM *odoratum Scopoli Fl. Carniol. No.* 38. *Hudſon Fl. Angl. p.* 10. *Stillingfleet miſcel. t.* 1. *Schreber Gram. tab.* 5. *p.* 49.
GRAMEN pratenſe ſpica flaveſcente. *Bauhin. Pin.* 3.
GRAMEN vernum ſpica brevi laxa. *Raii Syn.* 389. *Scheuch. hiſt.* 88.

RADIX perennis, fibroſa.
CULMI primum obliqui, demum erecti, dodrantales aut pedales.
FOLIA inter digitos attrita odorem Aſperulæ odoratæ ſpargunt, plerumque pubeſcentia, ſæpe leniter tortuoſa, membranâ ad baſin inſtructa, Vagina ſtriata, lævis.
SPICÆ oblongo-ovatæ, laxæ.
CALYX: GLUMA bivalvis, Valvulis inæqualibus, inferiore dimido breviore, membranacea, acuta, ſuperiore acuminata, nervis tribus viridibus extantibus, *fig.* 3, 2.
COROLLA: GLUMA bivalvis, valvulæ ſubæquales, membranaceæ, *piloſæ* ariſtatæ, fuſcæ; altera Ariſta quæ demum geniculata fit, prope baſin exſurgit, altera prope apicem, *fig.* 4.

NECTARIUM: GLUMULÆ duæ, pellucidæ, nitidæ, ovatæ, inæquales, *germen includentes*, *fig.* 5, 6.

STAMINA: FILAMENTA duo prælonga; ANTHERÆ oblongæ, purpureæ, utrinque furcatæ, *fig.* 5.
PISTILLUM: GERMEN minimum oblongo-ovatum; STYLI duo *filiformes* glumi longiores, verſus apicem plumuloſæ, *fig.* 7.

SEMEN unicum, Nectario fuſco, nitido, incluſum, *fig.* 8.

ROOT perennial and fibrous.
STALKS at firſt growing obliquely, finally becoming upright, uſually from 8 to 12 inches high.
LEAVES, if rubbed betwixt the fingers, ſmelling like Woodroff, generally pubeſcent and often curled, furniſhed with a membrane at bottom; the Sheath ſtriated and ſmooth.
SPIKES of an oblong oval ſhape and ſmooth.
CALYX: a GLUME of two Valves, the Valves unequal, the lowermoſt ſhorter by one half, membranous and acute; the uppermoſt acuminated, with three ſtrong nerves or ribs, *fig.* 3, 2.
COROLLA: a GLUME of two Valves, the Valves nearly equal, membranous, hairy, of a brown colour, and furniſhed with Ariſtæ, one of the Ariſtæ, which finally becomes bent, ſprings from the baſe of the Valve, the other almoſt at the top, *fig.* 4.
NECTARIUM: two ſmall, pellucid, ſhining, oval, unequal Glumes or Valves *incloſing the Germen*, *fig.* 5, 6.
STAMINA: two FILAMENTS very long; ANTHERÆ long, purple, forked at each end, *fig.* 5.
PISTILLUM: GERMEN very ſmall, of an oblong oval ſhape; STYLES two, *ſlender*, longer than the valves, and towards the top a little feathered, *fig.* 7.
SEED ſingle, incloſed within its brown, ſhining Nectarium, *fig.* 8.

THE *Anthoxanthum* is diſtinguiſhed from the other Graſſes by a very ſingular circumſtance, viz. that of having only *two Stamina*, *fig.* 1. hence it is placed by LINNÆUS among the *Diandrous* plants, and ſeparated from all the other Graſſes; this peculiarity, although it occaſions a ſeparation which does violence as it were to Nature, yet it ſerves in a very ſtriking manner to diſcriminate this Genus from a numerous and difficult tribe of plants: excluſive of this ſingularity, it differs alſo very eſſentially in the other parts of its fructification; each of the Spiculæ contains in common with many other graſſes, only one flower, *fig.* 1: one of the *Glumæ Calycinæ*, or valves of the Calyx, is ſmall and membranous, *fig.* 3; the other is large, and incloſes, or wraps up in it, as it were, the whole of the fructification, *fig.* 2; theſe glumes, ſo far as I have obſerved, do not open and expand themſelves in the manner obſervable in the *Avena's*, and many other graſſes, were they ſeparate quite wide, and expoſe their little feathery Styles; but the Stamina and Piſtilla appear to puſh themſelves out, the glumes remaining cloſed, *fig.* 1. The *Glumæ Corollaceæ* are very diſſimilar to thoſe of moſt other graſſes, being remarkably hairy, and having each of them an Ariſta, the longeſt of which ſprings from near the baſe of the glume, is at firſt ſtraight, but as the ſeed becomes ripe, the top of it is generally bent horizontally inward; the other Ariſta ariſes from near the top of the oppoſite Glume or Valve, *fig.* 4. The *Glumulæ Nectarii* or little Glumes of the Nectarium, differ no leſs in their ſtructure, being compoſed of two little oval ſhining Valves, one of which is ſmaller than the other; theſe cloſely embrace the Germen, and cannot be ſeen but with great difficulty, unleſs they are obſerved juſt at the time that the Antheræ are protruding from betwixt them, when they are very diſtinct, *fig.* 6; as ſoon as the Antheræ are excluded, they again cloſe on the Germen, and continue to form a coat to the ſeed which does not ſeparate. *fig.* 5, 8.

The Farmer, or thoſe who have not been accuſtomed to examine plants minutely, may readily diſtinguiſh this graſs by its ſmell; if the leaves are rubbed betwixt the fingers, they impart a grateful odour like that of Woodruff,—hence I have called it ſweet-ſcented.

Like the *Trifolium repens* or *Dutch Clover*, and many others of our moſt uſeful plants, this Graſs grows on almoſt every kind of ſoil, from the pooreſt and drieſt, to the moſt fertile and boggy; it ſeems however in general to prefer a ſoil that is moderately dry. It is ſubject, like all other plants, to vary in its ſize, according to the goodneſs of the ground it grows in: the leaves have a particular tendency to be curled if the ſoil be rich; and when it grows in woods, the ſpikes are often much ſlenderer and looſer.

It has been called by ſome Authors *Vernal* or *Spring Graſs*, from its coming into ear earlier than moſt others; towards the middle of May it is in full bloom, and about the middle of June the ſeed is ripe—and may be eaſily ſeparated on rubbing.

There is great reaſon to believe, that this is one of our Graſſes which might be cultivated with conſiderable advantage: in the meadows about town it grows to a conſiderable height, and forms a thick tuft of leaves at bottom; but the circumſtance moſt in its favour, is its early appearance in the Spring: this ſeems to point it out as a proper graſs to ſow with others in laying down meadow land, and probably the *Poa trivialis* or *common Meadow Graſs*, with the *Feſtuca elatior* or *Meadow Feſcue* joined to it, would form a mixture, the produce of which, would for this purpoſe, be ſuperior to that of moſt others.



Anthoxanthum odoratum.


Thlaspi Bursa Pastoris.
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2
3
4
5
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THLASPI BURSA PASTORIS. SHEPHERD's PURSE.

THLASPI *Linnæi Gen. Pl.* TETRADYNAMIA SILICULOSA.

Silicula emarginata, obcordata, polyſperma: valvulis navicularibus, marginato-carinatis.

Raii Syn. Gen 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

THLASPI *Burſa paſtoris* ſiliculis obcordatis, foliis radicalibus pinnatifidis. *Linnæi Syſt. Vegetab. p.* 491. *Spec. Pl.* 903. *Fl. Suecic.* 227.

NASTURTIUM ſiliquis triangularibus, *Haller hiſt. v.* 1. *p.* 221

PASTORIA BURSA *Fuſchii icon.* 611.

BURSA PASTORIS major folio ſinuato. *Bauhin Pin.* 108. *Gerard emac.* 276. *Parkinſoni Theat.* 866. *Raii Syn.* 306. *Hudſon. Fl. Angl.* 247. *Scopoli. Fl. Carniol. v.* 2. 17.

RADIX annua, fibroſa, albida.

CAULIS pedalis, erectus, ramoſus, teres, ſubaſper.

FOLIA *radicalia* hirſutula, pinnatifida, laciniis quoad formam mire variantibus, *caulina* amplexicaulia, dentata.

PEDUNCULI uniflori, demum fere horizontales.

CALYX: PERIANTHIUM tetraphyllum, foliolis ovatis, concavis, ſubpiloſis, margine membranaceis, *fig.* 1.

COROLLA: PETALA quatuor alba, calyce paulo longiora, apice rotundata, *fig.* 2.

STAMINA: FILAMENTA ſex, alba, quorum quatuor longitudine Styli, duo breviora incurvata; ANTHERÆ flavæ, *fig.* 3.

PISTILLUM: GERMEN oblongo-cordatum; STYLUS breviſſimus; STIGMA villoſum, *fig.* 4.

PERICARPIUM: SILICULA lævis, *obcordata*, bivalvis, *fig.* 5.

SEMINA plurima, pedicellata, flaveſcentia, margini Diſſepimenti affixa, *fig.* 6.

DISSEPIMENTUM utrinque acutum Valvis contrarium.

ROOT annual, fibrous and whitiſh.

STALK about a foot high, upright, branched, round, a little prickly.

LEAVES: *radical leaves* ſlightly hirſute, pinnatifid, the laciniæ or jags varying exceedingly in their form; the upper leaves embracing the ſtalk, and indented at the edges.

PEDUNCLES, ſupporting one flower on each, nearly horizontal when the flowers are gone off.

CALYX: a PERIANTHIUM of four leaves, the leaves oval, hollow, ſlightly hairy, and membranous at the edges, *fig.* 1.

COROLLA: four white PETALS, a little longer than the Calyx, round at top, *fig.* 2.

STAMINA: ſix white FILAMENTS, four of which are of the ſame length as the Style; two are ſhorter and bent a little inwards: ANTHERÆ yellow, *fig.* 3.

PISTILLUM: GERMEN of an oblong heart-ſhape; STYLE very ſhort; STIGMA villous, *fig.* 4.

SEED-VESSEL; a ſhort ſmooth pod, triangular or *heart-ſhaped*, with two valves, *fig.* 6.

SEEDS numerous, of a yellowiſh colour, ſtanding on little foot-ſtalks, which connects them to the edge of the Diſſepimentum or Partition, *fig.* 6.

PARTITION pointed at both ends, placed croſs-ways to the Valves.

THE radical leaves of this plant differ ſo exceedingly in their appearance, that the moſt expert Botaniſt is often obliged to have recourſe to its moſt ſtriking character, the ſhape of its Seed-veſſels, before he can with certainty diſtinguiſh it. When it grows on walls and in dry ſituations, the leaves are more deeply divided, and the Laciniæ become much narrower; in cultivated ground they are broader and leſs jagged: It differs likewiſe no leſs with repect to its ſize, ſometimes being not more than two or three inches high, and at other times as many feet.

March and *April* are the months in which it is found moſt generally in bloſſom, yet like the *Groundſel* and *Poa annua*, it may be found in this ſtate at almoſt any time of the year,

It acquires its name of *Shepherd's Pouch* or *Purſe*, from the particular ſhape of its pods, by which it is obviouſly diſtinguiſhed from all our other Tetradynamous plants.

The plant is collected and given to ſmall birds, who appear to be very fond of the ſeeds, and this is the only uſe to which we at preſent know of its being applied.

GERANIUM CICUTARIUM. HEMLOCK-LEAVED CRANE'S-BILL.

GERANIUM *Linnæi Gen. Pl.* MONADELPHIA DECANDRIA.
Monogyna. *Stigmata* quinque. *Fructus* roſtratus, pentacoccus.

Raii Syn. HERBÆ PENTAPETALÆ VASCULIFERÆ.

GERANIUM *cicutarium* pedunculis multifloris, floribus pentandris, foliis pinnatis inciſis obtuſis, caule ramoſo.
Linnæi Syſt. Vegetab. p. 90. *Fl. Suecic. p.* 243.

GERANIUM petiolis multifloris, caule procumbente, foliis duplicato-pinnatis, pinnulis acute inciſis.
Haller. hiſt. No. 944.

GERANIUM cicutæ folio minus, et ſupinum. *Bauhin. Pin.* 319.

GERANIUM cicutæ folio inodorum album. *Gerard emac.* 945. 946.

GERANIUM moſchatum inodorum. *Parkinſon.* 1708. *Raii Syn.* 357. Field Crane's-bill without ſcent.
Hudſon. Fl. Angl. 262.

RADIX annua, albida, ſimplex, carne tenera, cum nervo intus duriore et tenaciore, paucis fibris inſtructa, craſſiuſcula, et in terram alte deſcendens.

CAULES ex eadem radice naſcuntur plures, craſſiuſculi, teretes, hirſuti, procumbentes, ramoſi, variæ longitudinis pro ratione loci.

FOLIA pinnata, pinnis ſeſſilibus pubeſcentibus, pinnulis acute inciſis.

STIPULÆ ad exortum foliorum membranaceæ, albidæ, ovato-acutæ, ſuperiore integra, *fig.* 1.; inferiore in duas diviſa, *fig.* 2.

PEDUNCULI axillares, alterni, hirſuti, multiflori, longitudine foliorum.

FLORES umbellati, roſei, a tribus ad ſex.

INVOLUCRUM membranaceum, multidentatum, *fig.* 3.; PEDICELLI baſi craſſiores, deflexi, et demum aſſurgentes.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, ſtriatis, hirſutis, concavis, mucronatis, *fig.* 4.

COROLLA: PETALA quinque, ſubovata, plana, ſubæqualia, roſea, baſi hirſuta, calyce longiora, *fig.* 5.

STAMINA: FILAMENTA decem, quorum quinque alterna Antheris carent, *fig.* 7.: ANTHERÆ ſaturate purpuraſcentes, *fig.* 6.

NECTARIA: *Glandulæ* quinque fuſcæ circa baſin ſtaminum locantur, *fig.* 9.

PISTILLUM: GERMEN quinquangulare, villoſum; STYLUS ſubulatus, ſulcatus; STIGMATA quinque, purpuraſcentia, paululum reflexa, *fig.* 10, 11.

PERICARPIUM nullum; FRUCTUS pentacoccus, roſtratus.

SEMEN oblongum, læve, fuſcum, arillatum, *fig.* 14. ARILLA hirſuta; ARISTA prælonga piloſa inſtructa quæ demum ſpiralis evadit, *fig.* 12, 13.

ROOT annual, whitiſh, ſimple, tender, the ſtring or nerve in the middle of it hard and tough, furniſhed with few fibres, large for the ſize of the plant, and penetrating deep into the earth.

STALKS: ſeveral uſually ſpring from the ſame root, thickiſh, round, hirſute, procumbent, and branched, of various lengths according to their place of growth.

LEAVES pinnated, the pinnæ ſeſſile and ſlightly hairy, the pinnulæ ſharply indented.

STIPULÆ at the baſe of the leaves membranous, whitiſh, acutely oval, the uppermoſt intire, *fig.* 1.; the lowermoſt generally divided into two, *fig.* 2.

FOOT-STALKS of the flowers ſpringing from the baſe of the leaves, alternate, hirſute, the length of the leaves, and ſupporting many flowers.

FLOWERS growing in an umbell, from three to ſix, of a roſe-colour.

INVOLUCRUM membranous, with many teeth, *fig.* 3.; the ſmall foot-ſtalks of the flowers thickeſt at bottom, turning down, and laſtly turning upward.

CALYX: a PERIANTHIUM of five leaves, the folioli oval, ſtriated, hirſute, concave, and terminating in a fine point, *fig.* 4.

COROLLA: five PETALS, ſomewhat oval, flat, nearly equal, of a roſe-colour, hairy at bottom, ſomewhat longer than the Calyx, *fig.* 5.

STAMINA: ten FILAMENTS, five of which want the Antheræ; the ANTHERÆ of a deep purple colour, *fig.* 6.

NECTARIA: five brown *Glands* placed round the baſe of the Stamina, *fig.* 9.

PISTILLUM: GERMEN quinquangular and villous, STYLE tapering and grooved; STIGMATA five, of a purple colour, bending a little back, *fig.* 10, 11.

SEED-VESSEL none; FRUIT as yet unripe, formed of five protuberating ſeeds, and terminating in a long beak.

SEED oblong, ſmooth, brown, incloſed within an ARILLUS, *fig.* 14. which is hirſute, and furniſhed with a long hairy ARISTA, finally becoming ſpiral, *fig.* 12, 13.

We have often had occaſion to remark the very great difference in the appearance of plants ariſing from ſoil and ſituation. Of this the young Botaniſt cannot be too well appriſed, nor too often informed: from a want of attention to this circumſtance, the plant which we have now deſcribed has been divided by different Authors into ſeveral ſpecies.

It ſeems worthy of notice, that the alterations which are produced in plants, from growing in a richer ſoil, are chiefly thoſe of increaſe of ſize, and a multiplication of their parts; the minutiæ of the fructification ſuffer but little change in their form by culture, hence they are often moſt to be depended on, even in aſcertaining different ſpecies.

When the *Geranium Cicutarium* grows on a dry ſandy bank or wall, as it very frequently does, it is quite diminutive. When it occurs in a moiſter and more luxuriant ſoil, the branches extend often a foot or two in length, and the whole plant becomes ſo altered in its general appearance, as readily to deceive the inexperienced Tyro; but the long pointed fruit which occurs in both, and from whence this plant has obtained the name of *Crane's bill*, readily points them out to be the ſame.

The ſeeds of the Geraniums are, in general, encloſed within a membranous *Arillus*, which terminates in an *Ariſta* or *Tail*, of different lengths in different ſpecies; in ſome of them, when the ſeeds are become ripe, they detach themſelves from the receptacle, to which they are affixed, with conſiderable elaſticity, and the ſeeds, being looſely contained within the *Arillus*, are thrown out to a conſiderable diſtance. In the preſent ſpecies, the ſeeds are more cloſely inveſted by the *Arillus*, which does not ſeparate itſelf with ſo much force, and as ſoon as detached the *Ariſta* begins to be twiſted up in a ſpiral form. This may be very diſtinctly obſerved, if we ſeparate a ſeed, with its *Arillus*, as ſoon as ripe, and place it in the palm of the hand, the tail of the *Arillus* immediately appears in motion, as if endued with ſome ſenſitive property, and continues uninterruptedly this motion till it has aſſumed the form of a ſcrew, *vid. fig.* 13. The ſeed, thus furniſhed with its twiſted Ariſta, is more liable to attach itſelf to any thing which may come in contact with it, by which means this plant is more univerſally diſſeminated.

The *Geranium Moſchatum* has a great affinity with this ſpecies: that plant however has a ſtrong ſmell of muſk, which this entirely wants; and has alſo many other peculiarities, which we ſhall not fail to particularize when it comes to be treated of.



Geranium cicutarium.



Viola odorata.

VIOLA ODORATA. SWEET VIOLET.

VIOLA *Linnæi Gen. Pl.* SYNGENESIA MONOGAMIA.

Calyx pentaphyllus. *Corolla* pentapetala, irregularis, poſtice cornuta. *Capſula* ſupera, trivalvis, unilocularis.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

VIOLA *odorata* acaulis, foliis cordatis, ſtolonibus reptantibus, bractæis ſupra medium pedunculi.

VIOLA *odorata*, acaulis, foliis cordatis, ſtolonibus reptantibus. *Linn. Syſt. Vegetab. p.* 668.

VIOLA acaulis ſtolonifera, foliis cordatis. *Haller. hiſt. helv. n.* 558.

VIOLA *odorata. Scopoli Fl. Carn. n.* 1097.

VIOLA martia purpurea flore ſimplici odoro. *Bauhin. Pin. p.* 199. martia alba. *p.* 199.

VIOLA nigra ſive purpurea. *Ger. emac.* 550.

VIOLA ſimplex martia. *Parkinſon.* 755. *Raii Syn. p.* 364. Purple Sweet Violet, and White Sweet-ſcented Violet. *Oeder. Fl. Dan. Icon.* 309.

RADIX perennis, fibroſa, albida, in ſeneſcente plantâ baſi petiolorum quotannis relicta pars ſuperior radicis tuberculoſa evadit, et ſupra terram eminet; e ſinu horum nodoroum naſcuntur ſtolones, qui humi repent, et foliis inſtruuntur ſtipuliſque ejuſdem formæ ac illæ quæ ad baſin plantæ inveniuntur.

ROOT perennial, fibrous, and whitiſh; in old plants the upper part of the root becomes knobby, and appears above ground, the knots or knobs being formed from the bottoms of the foot-ſtalks of the leaves which are yearly left; from the boſoms of theſe knobs ſpring the ſtolones or ſhoots which creep on the ground, and are furniſhed with leaves and the ſame kind of Stipulæ which are obſervable at the bottom of the plant.

FOLIA ſubrotundo-cordata, crenata, ſuperne glabra, inferne hirſutula, junioribus involutis.

LEAVES heart-ſhaped, and ſomewhat round at the tip, crenated, on the upper ſide ſmooth and ſhining, underneath ſlightly hairy, when young rolled in at the edges.

STIPULÆ radicales, ovato-lanceolatæ, membranaceæ, ſerratæ, dentibus glanduliferis.

STIPULÆ ſpringing from the root, ovato-lanceolate, membranous, ſerrated at the edges, each ſerrature or tooth terminating in a minute gland.

PEDUNCULI radicales, infra Bractæas quadrangulares, ſupra Bractæas dorſo canaliculati, apice incurvati, uniflori.

PEDUNCLES ſpringing from the root, below the Bracteæ quadrangular, above the Bracteæ grooved on the upper ſide, at top incurvated, ſupporting one flower.

BRACTEÆ duæ, lanceolatæ, plerumque oppoſitæ, appreſſæ, *ſupra medium pedunculi.*

BRACTEÆ two, lanceolate, generally oppoſite to each other, preſſed to the ſtalk, and *placed above the middle of the Peduncle.*

CALYX: PERIANTHIUM pentaphyllum, perſiſtens, foliolis oblongo-ovatis, obtuſis, e viridi purpuraſcentibus, *fig.* 1.

CALYX: a PERIANTHIUM of five leaves, continuing, each leaf of an oblong oval ſhape, obtuſe at the tip, and of a greeniſh purple colour, *fig.* 1.

COROLLA pentapetala, irregularis, violacea, odorata, petalum infimum Nectario corniculato, obtuſiuſculo, apice compreſſo inſtructum, Petala lateralia prope baſin barbata, *fig.* 2.

COROLLA: of five PETALS, irregular, of a bluiſh purple colour and ſweet ſmell, the lowermoſt terminating in a blunt horned NECTARIUM, a little flattened at the extremity, the two ſide Petals bearded near the baſe, *fig.* 2.

STAMINA: FILAMENTA quinque breviſſima ægre diſtinguenda: ANTHERÆ flaveſcentes, biloculares, vix connexæ, membranâ ovato-acuta aurantiaca terminatæ; e parte poſteriori duarum Antherarum exit Nectariumque intrat appendicula viridis, linearis, compreſſa, *fig.* 5, 4, 3.

STAMINA: five FILAMENTS ſo ſhort as hardly to be diſtinguiſhed; ANTHERÆ yellowiſh, bilocular, ſcarcely connected together, terminated by an oval-pointed, orange-coloured membrane; from the back of two of the Antheræ, ſprings a ſlender, flat, greeniſh appendage, which enters the Nectarium, *fig.* 5, 4, 3.

PISTILLUM: GERMEN ſubrotundum; STYLUS baſi tenuior et paululum tortuoſus; STIGMA uncinatum, Antheris paulo longius, *fig.* 6, 7.

PISTILLUM: GERMEN roundiſh; STYLE ſlendereſt at bottom, and a little twiſted; STIGMA hooked and a little longer than the Antheræ, *fig.* 6, 7.

PERICARPIUM priuſquam dehiſcit, ſubrotundo-triangulare, purpuraſcens, villoſum; trivalve valvulis ſubrotundis concavis, *fig.* 8.

SEED-VESSEL, before it burſts, roundiſh, rather approaching to triangular, of a purpliſh colour, and villous appearance, ſplitting into three roundiſh hollow valves, *fig.* 8.

SEMINA plurima, rotunda, nitida, ſtraminea, appendiculata, *fig.* 9.

SEEDS ſeveral, round, ſhining, of a ſtraw colour, terminated by a little appendage, *fig.* 9.

The *Viola odorata* delights to grow under warm hedges, particularly near Woods. If the Spring be favourable, it is generally in full bloom in the month of March; and towards the latter end of Summer ripens its ſeeds. A variety of this plant frequently occurs with a white flower, not inferior in its agreeable ſcent to the blue one; and ſometimes this plant is found double, in which ſtate it is often introduced into Gardens, and being furniſhed with abundance of creeping ſhoots, it is, by means of theſe, propagated with the utmoſt facility.

This ſpecies of Violet bears a conſiderable reſemblance to the *Viola hirta*, the mode of diſtinguiſhing them we ſhall point out when we deſcribe the latter.

A ſyrup made from the flowers is uſually kept in the ſhop, and frequently given to children where a gentle laxative is required. It is likewiſe in uſe as a teſt to try acid and alkaline ſubſtances. The

The ſeeds are ſaid by Authors to poſſeſs a diuretic quality, and hence the powder of them has been recommended in the ſtone and gravel.

The great BACON, who frequently deſcended from his ſublimer ſtudies, and amuſed himſelf with enquiries into the qualities and properties of plants, has left us a curious method of preſerving the ſcent of this flower.

" *Take Violets, and infuſe a good pugil in a quart of Vineger, let them ſtand three quarters of an hour, and take them*
" *forth, and refreſh the infuſion with like quantity of Violets ſeven times; and it will make a Vineger ſo freſh of*
" *the flower, as, if a twelve month after it be brought you in a ſaucer, you ſhall ſmell it before it come at you.*
" Note. *It ſmelleth more perfectly of the flower a good while after than at the firſt.*"

The illuſtrious preſcriber has given no directions concerning the uſe of this preparation; but it appears to us, to be one of the moſt grateful preſervatives againſt infection, eſpecially if the ſtrongeſt diſtilled vinegar, which has been drawn over in glaſs, be made uſe of.

The Violet has been much complimented by the antient Poets; and our SHAKESPEARE gives it a conſpicuous place in his catalogue of flowers:

——————————— " *Violets dim,*
" *But ſweeter than the lids of* JUNO's *eyes,*
" *Or* CYTHEREA's *breath.*"

The Commentators have not been ſucceſsful in informing us how the " *lids of* JUNO's *eyes*" bear any reſemblance to " *Violets dim*," not recollecting that ιοβλεφαρος *(having violet eyelids)* was a complimentary title with the Greek poets. This epithet alludes to a well known cuſtom which ſtill prevails in Greece, of colouring the eyelids blue *. " A " Grecian girl is painted blue round the eyes; and the inſides of the ſockets, with the edges on which the laſhes " grow, are tinged with black: for colouring the laſhes and ſocket of the eye, they throw incenſe or Gum of " Labdanum on ſome coals of fire, intercept the ſmoak which aſcends with a plate, and collect the ſoot: this I " ſaw applied; a girl ſitting croſs-legged, as uſual, on a ſopha, and cloſing one of her eyes, took the two laſhes " between the fore-finger and thumb of her left-hand, pulling them forward, and then thruſting in, at the " external corner, a bodkin which has been immerſed in the ſoot, and extracting it again, the particles before " adhering to it remained within, and were preſently ranged round the organ, ſerving as a foil to its luſtre, beſides " contributing, as they ſay, to its health, and increaſing its apparent magnitude." CHANDLER's *Travels into Greece.*

Although the poet of nature has been rather obſcure on this ſubject, where he copies the ancients, he makes ample amends when he gives us the genuine effuſions of his own imagination. With what preciſion and delicacy does he deſcribe the ſoft enchantment of plaintive muſic, as reſembling the ſweetneſs of this flower, illuſtrating, in a beautiful ſimile, the object of one ſenſe by that of another!

" *That ſtrain again*; —— *it had a dying fall*;
" *Oh! it came o'er my ear, like the ſweet ſouth,*
" *That breathes upon* a bank of violets,
" *Stealing and giving odour!*"

* A Greek poet, ſuppoſed to be a Chriſtian from the ſeverity of his manners and purity of his inſtructions, forbids this cuſtom of painting the eye-lids, in the rules of conduct which he addreſſes to young women:

" Μηδε μιλαινε τεοισιν υπο βλεφαρoισιν οπωπας."
NAUMACHIUS.

It is probable that the Greeks borrowed this faſhion from their Aſiatic neighbours; JEZEBEL, a native of Zidon, *put her eyes in painting*, as the tranſlators tell us in the magin of our Bible: the Prophets alſo allude to, and cenſure this cuſtom; ſee *Jeremiah* iv. 30. *Ezekiel* xxiii. 40.

ANTIRRHINUM CYMBALARIA. IVY-LEAV'D ANTIRRHINUM.

ANTIRRHINUM *Linnæi Gen. Pl.* DIDYNAMIA ANGIOSPERMIA.

Raii Syn. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

ANTIRRHINUM *Cymbalaria* foliis cordatis quinquelobis alternis, caulibus procumbentibus. *Linnæi Syſt. Vegetab. p.* 454. *Sp. Pl. p.* 851.

ANTIRRHINUM caule repente, foliis reniformibus, quinquelobatis. *Haller hiſt. p.* 146. *n.* 339.

ANTIRRHINUM *Cymbalaria Scopoli Fl. Carniol. n.* 770.

CYMBALARIA *Bauhin pin.* 306.

LINARIA *hederaceo folio glabro, ſeu Cymbalaria vulgaris. Tourn.* 169. *Garidel,* 287. *Gouan. Fl. Monſp. p.* 100. *Gerard Fl. Galloprov. p.* 292. *Raii Syn. p.* *282. *Hudſon Fl. Angl. p.* 237.

Tota Planta glabra, cum odore ingrato.

The whole plant ſmooth, with a diſagreeable ſmell.

RADIX perennis, fibroſa, intra fiſſuras murorum penetrans; eradicatione difficilis.

ROOT perennial, fibrous, penetrating between the crevices of the walls, and ſcarce to be eradicated.

CAULES plures, confertim naſcuntur, baſi repentes, procumbentes, ramoſi, teretes, glabri, purpuraſcentes, nervo intus duriore et tenaciore ſicut in Alſine.

STALKS numerous, growing in a kind of tuft, creeping at bottom, procumbent, branched, round, ſmooth, purpliſh, and ſtringy as in Chickweed.

FOLIA quinquelobata, glabra, ſubcarnoſa, oppoſita, aut alterna, ſæpe purpuraſcentia, *fig.* 12.

LEAVES quinquelobate, ſmooth, ſomewhat fleſhy, ſome of them oppoſite, others alternate, frequently purpliſh, *fig.* 12.

PETIOLI longi, ſuperne ſulcati.

FOOT-STALKS of the leaves long, on the upper part grooved.

PEDUNCULI teretes, petiolis paulo longiores.

FOOT-STALKS of the flowers, round, a little longer than the foot-ſtalks of the leaves.

CALYX: PERIANTHIUM quinquepartitum, laciniis lanceolatis, perſiſtentibus, *fig.* 1.

CALYX: a PERIANTHIUM divided into five ſegments, which are lanceolate and continuing, *fig.* 1.

COROLLA monopetala, ringens; TUBUS brevis, *fig.* 6; LIMBUS bilabiatus, labium ſuperius bifidum, reflexum, purpureum, venis duabus ſaturatioribus ſtriatum, *fig.* 2. inferius trifidum, laciniis ſubrotundis, albidis, *fig.* 3; PALATUM prominens, bifidum, flavum, *fig.* 5; FAUX villoſum, croceum.

COROLLA monopetalous, ringent; the TUBE ſhort, *fig.* 6: the LIMB divided into two lips; the upper lip bifid, turning back, and purple, ſtriped with two veins of a deeper colour, *fig.* 2; the lower lip trifid, the ſegments round and whitiſh, *fig.* 3; the PALATE prominent, bifid, and yellow, *fig.* 4; the MOUTH or entrance into the tube villous and ſaffron-coloured.

NECTARIUM purpureum, conicum, longitudine calycis, *fig.* 5.

NECTARY purple, conical, the length of the Calyx, *fig.* 5.

STAMINA: FILAMENTA quatuor, duo breviora; ANTHERÆ bilobæ, albæ, conniventes, *fig.* 7.

STAMINA: four FILAMENTS, two ſhort and two long; ANTHERÆ compoſed of two lobes, white and connivent, *fig.* 7.

PISTILLUM: GERMEN ſubrotundum, purpureum; STYLUS filiformis; STIGMA obtuſum, *fig.* 8.

PISTILLUM: GERMEN roundiſh and purple; STYLE filiform; STIGMA blunt, *fig.* 8.

PERICARPIUM CAPSULA ſubrotunda, rugoſa, ſeminibus protuberantibus, bivalvis, valvis apice in plures lacinias dehiſcentibus, *fig.* 9, 10.

SEED-VESSEL a roundiſh CAPSULE, ſurface uneven, from the ſeeds protuberating, of two valves, which open at top into ſeveral laciniæ, *fig.* 9, 10.

SEMINA nigra, ſubrotunda, rugoſa, *fig.* 10.

SEEDS black, roundiſh and wrinkled, *fig.* 10.

This Species of *Antirrhinum* is ſo perfectly diſtinct from all the others which grow wild in this country, that there is no poſſibility of miſtaking it. It is found in great plenty in all thoſe parts near London that lay within the reach of the Thames; the ſeeds are carried by the flux and reflux of the tide up and down the river, and left at high water mark in the crevices of old walls, where they take root and increaſe very faſt. It is ſuppoſed to have been introduced to us from Italy, whether for the purpoſes of ornament or medicine is uncertain.

The Walls of the *Phyſic-Garden,* at *Chelſea,* from whence it has probably originated in this country, are plentifully covered with it; it may alſo be found on the *Temple* Walls, and at the ſides of the ſtream running under *Vauxhall* Turnpike.

In ſome ſituations the leaves grow much larger than thoſe of the annexed ſpecimen.



Antirrhinum Cymbalaria.



Viola hirta.

VIOLA HIRTA. HAIRY VIOLET.

VIOLA *Linnæi Gen. Pl.* SYNGENESIA MONOGAMIA.

Calyx pentaphyllus. *Corolla* pentapetala, irregularis, poſtice cornuta. *Capſula* ſupra, trivalvis, unilocularis.

Raii Synop. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

VIOLA *hirta* acaulis, foliis petioliſque hirſutis, bractæis infra medium pedunculi.

VIOLA *hirta* acaulis, foliis cordatis piloſo hiſpidis. *Linn. Syſt. Vegetab. p.* 668.

VIOLA acaulis, foliis cordatis hiſpidis. *Haller hiſt. helv. n.* 559.

VIOLA *hirta. Hudſon Fl. Angl. p.* 330.

VIOLA martia major hirſuta inodora. *Hiſt. ox. II.* 475.

VIOLA trachelii folio vulgo. *Raii hiſt.* 1051. *Syn. p.* 365. Violet with Throat-wort leaves.

So great is the ſimilarity betwixt this Species and the *Viola odorata*, that to deſcribe it in the ſame manner as I have that plant, would be to repeat nearly the ſame words. To avoid this ſameneſs of expreſſion, I ſhall adopt a deſcription in the way of contraſt, which will enable me to point out the differences of each in a manner more ſtriking, and I hope equally ſatisfactory to my botanic readers.

I would firſt premiſe, that as it is my greateſt wiſh to clear up every difficulty reſpecting the ſpecies and varieties of thoſe plants which come properly before me; ſo I have with that view, not only examined this plant with the greateſt attention, where it has grown wild, but alſo cultivated it in my garden along with the *odorata*, and hence, ſeeing and noticing its mode of growth throughout the year, have perhaps been able to obtain a clearer idea of its hiſtory, than thoſe who may have viewed it at one particular ſeaſon only.

The *Viola odorata* throws out from the upper part of its root a number of ſtolones or ſhoots, which trail on the ground, and quickly take root at the joints, whereby it propagates itſelf very faſt: the *hirta* likewiſe increaſes itſelf by throwing out young ſtalks; but then they are not procumbent, nor do they ever ſtrike root as thoſe of the *odorata* do; hence the *hirta* does not increaſe ſo faſt, nor ſpread ſo wide. Although LINNÆUS makes a conſiderable difference in the form of the roots of theſe plants, yet from what I have obſerved, this difference proceeds chiefly from the age of the roots; for in both ſpecies, the older they are, the more full are they of tubercles or cicatrices, formed by the annual ſhedding of the leaves.

The radical *Stipulæ* are lanceolate and ſerrated in both ſpecies.

The *foot-ſtalks* of the leaves form perhaps the moſt obvious difference; in the *odorata* they are nearly ſmooth; in the *hirta* they are very hirſute, and this hairineſs puts on a kind of ſilvery appearance in the young plants of this ſpecies, where it is remarkably conſpicuous.

In the leaves themſelves, the difference is, for the moſt part, not very remarkable, for in both ſpecies they are ſomewhat hirſute underneath; thoſe of the *hirta* however, are ſometimes remarkably ſo, from growing in particular ſoils or ſituations: the leaves of the *odorata* have a more gloſſy appearance on their upper ſurface, but this ſcarce diſcriminates them unleſs they are contraſted. With reſpect to ſhape and ſize likewiſe, the difference is not very obvious; both ſpecies when in bloom are ſmall, compared to the ſize to which they afterwards grow. In make they are ſomewhat longer, and not ſo perfectly heart-ſhaped.

In the ſpecimens of this plant, which I have examined, I could not perceive that ſenſible difference which LINNÆUS notices (*vid. Mantiſſ. Plant. alt. p.* 483.) in the ſhape of the *Peduncle* above the Bracteæ; in both ſpecies they certainly are channelled at the back: in the ſituation of the Bracteæ, however, there is a very conſiderable difference, which does not appear to have been taken notice of; and this ſeemed to me to be ſo obvious a character, that I truſt it will apologize for my altering its ſpecific deſcription: in the *odorata*, the Bracteæ are placed *above* the middle of the Scapus, or Peduncle; in the *hirta*, they are ſituate below it: but there is one caution neceſſary to be obſerved reſpecting this character, viz. that the Bracteæ of each be obſerved, juſt when the flowers are fully expanded, for as that part of the Scapus, which is ſituated above the Bracteæ, grows conſiderably longer by the time that the flowers of the *odorata* are faded, ſo they ſhould both be examined when of an equal age, otherwiſe this diſtiction will not appear ſo remarkable.

The flowers of the *hirta*, in general, appear about a week later than thoſe of the *odorata*, are of a paler blue colour, and entirely want that ſweet fragrance which renders the *odorata* ſo grateful a harbinger of the Spring. In the other parts of the fructification, theſe plants are very ſimilar to each other; but there is one circumſtance reſpecting the manner in which they produce and diſperſe their ſeeds, which may not be generally known.

LINNÆUS, in his *Flora Suecica*, *n.* 782, obſerves that the flowers which the *Viola mirabilis* firſt produces from the root, are furniſhed with Petals, yet that theſe for the moſt part are barren, while thoſe which blow later the ſame Spring, and riſe from the ſtalk, although deſtitute of Petals, produce perfect ſeed: and JACQUIN, in his excellent work the *Flora Auſtriaca*, where this plant is figured (*Vol.* 1. *pl.* 19.) confirms the truth of LINNÆUS's obſervations, and ſays, that the barrenneſs of thoſe flowers appeared to ariſe from a deficiency of the Stylus. LINNÆUS, in his valuable treatiſe above quoted, obſerves likewiſe, that the flowers of the *Viola montana*, which appear firſt, are furniſhed with Petals, but that thoſe which are afterwards produced have no Petals, yet nevertheleſs are fertile; and this I find, on repeated examination, to be the caſe with the *Viola odorata* and *hirta*, but more particularly the latter: they differ from the *Viola mirabilis* in this reſpect, that all the flowers which are formed, both with and without Petals, produce perfect ſeed. I was led to this diſcovery from obſerving a ſingle plant of the *Viola hirta*, to produce about the middle of Summer, ten or twelve capſules of ripe ſeeds, on which I was certain in the Spring no more than two or three bloſſoms had appeared: the next Spring I diſcovered, that beſides thoſe perfect bloſſoms which firſt ſpring up, this plant continues for a month or more to throw out new flowers, which are entirely deſtitute of Petals, or have only the rudiments of them, which never appear beyond the Calyx; but all the other parts of the fructification are perfect. The capſules in both theſe ſpecies, when they become nearly ripe, lie cloſe to the ground, ſo that when they burſt, the ſeeds have an eaſy acceſs into the earth.

There is ſome difference with reſpect to the ſoil and ſituation in which theſe two plants delight; the *odorata* grows very generally under warm hedges, and in woods; the other appears to be pretty much confined to a chalky ſoil, and often occurs in more expoſed ſituations; in the fields and on the banks about *Charlton*, it may be found in tolerable abundance.

GERANIUM ROBERTIANUM. STRONG-SCENTED CRANES-BILL, or HERB ROBERT.

GERANIUM *Linnæi Gen. Pl.* MONADELPHIA DECANDRIA.

Stigmata quinque. *Fructus* roſtratus, pentacoccus.

Raii Syn. 335. HERBÆ PENTAPETALÆ VASCULIFERÆ.

GERANIUM *robertianum* pedunculis biſloris, calycibus piloſis decemangulatis. *Linnæi Syſt Vegetab. p.* 515. *Fl. Suecic.* 241. *n.* 619.

GERANIUM foliis duplicato pinnatis, pinnis ultimis confluentibus, calycibus ſtriatis, hirſutis. *Haller hiſt. n.* 943.

GERANIUM *robertianum. Scopoli Fl. Carniol. n.* 845. *Hudſon Fl. Angl. p.* 264.

GERANIUM *robertianum* primum. *Bauhin. Pin.* 319.

GERANIUM *robertianum. Gerard. emac.* 939.

GERANIUM *robertianum* vulgare. *Parkinſon* 710. *Raii Syn. p.* 358.

RADIX annua, fuſca, fibris ramoſis prælongis inſtructa.

CAULES plures, diffuſi, ramoſi, ſanguinei ut ut tota planta haud infrequenter, geniculis tumidis, piloſi, præſertim in junioribus plantis.

FOLIA oppoſita, piloſa præcipue in umbroſis, unumquodque folium e tribus foliolis pinnatifidis baſi confluentibus componitur, foliolo medio longius pedicellato, laciniis ſpinula rubra terminatis.

STIPULÆ ad ſingulum geniculum quatuor, utrinque binæ.

PEDUNCULI biflori.

CALYX: PERIANTHIUM decemangulatum, perſiſtens, foliolis ovato-lanceolatis, nervoſis, hirſutis, mucronatis, *fig.* 1, 2.

COROLLA: PETALA quinque roſea, patentia, æqualia, lamina ſubcordata, unguis linearis, medio prominulo ſulcato in tres nervos albidos divaricante, *fig.* 3.

STAMINA: FILAMENTA decem fertilia, ſubulata, plana, alba, baſi cohærentia; ANTHERÆ purpuraſcentes, polline flavo repletæ, *fig.* 4, auct. 5.

PISTILLUM: GERMEN quinquangulare; STYLUS ſubulatus, villoſus; STIGMATA quinque, rubra, paululum reflexa, *fig.* 6.

SEMINA quinque Arillata, lævia, ovata, fuſca, ad unum latus compreſſa, *fig.* 9; ARILLUS rugoſus, *fig.* 7, 8.

ROOT annual, brown, furniſhed with long branched fibres.

STALKS ſeveral, ſpreading, branched, of a blood-red colour, as is frequently the whole plant (the joints tumid) hairy, particularly in the young plants.

LEAVES oppoſite, hairy, eſpecially when growing in the ſhade, each compoſed of three pinnatifid leaves, uniting at the baſe, the middle leaf ſtanding on the longeſt foot-ſtalk, the laciniæ or jags of the leaf terminated by a ſmall red ſpine.

STIPULÆ four at each joint, two on each ſide of it.

PEDUNCLES biflorous.

CALYX: a PERIANTHIUM having ten angles, and continuing, the leaves ovato-lanceolate, nervous, hairy, terminating in a point, *fig.* 1, 2.

COROLLA: five roſe-coloured PETALS, ſpreading and equal, the lamina ſomewhat heart-ſhaped, the claw linear, the middle part of it prominent, grooved, and ſpreading into three whitiſh nerves.

STAMINA: ten fertile FILAMENTS, tapering, flat, white, connected at bottom; ANTHERÆ purpliſh, filled with a yellow Pollen, *fig.* 4, magnified, *fig.* 5.

PISTILLUM: GERMEN having five angles; STYLE tapering, villous; STIGMATA five, red, a little turned back, *fig.* 6.

SEEDS five, contained within an Arillus, ſmooth, oval, brown, flattened on one ſide, *fig.* 9; the ARILLUS wrinkled, *fig.* 7, 8.

Although our Engliſh *Geraniums* cannot boaſt that grandeur and variety of ſplendid colours ſo conſpicuous in many of the foreign ones, yet ſeveral of them are ſufficiently beautiful to be entitled to a place in the gardens of the curious, particularly the *Bloody Cranes-bill (Geranium Sanguineum)*; the *Crowfoot Cranes-bill (Geranium Pratenſe)*; the *Perennial Doves-foot Cranes-bill (Geranium Perenne* of *Hudſon)* and the *Herb Robert*, which we have now deſcribed: the latter of theſe grows naturally in woods, but more particularly under the hedges which ſurround woods; it likewiſe is frequently found in old hollow trees, and not uncommonly on the roofs of houſes not much expoſed to the ſun: it is an annual plant; the ſeeds ſow themſelves in Autumn, ſoon after the young plants come up; flower the enſuing Spring, and continue to bloſſom the whole Summer long, if the plant grows in the ſhade: towards the latter-end of the year, both ſtalks and leaves become of a deep red or blood colour.

The whole plant has a diſagreeable ſmell when bruiſed, by which it will be diſtinguiſhed from our other ſpecies. It appears to grow all over Europe; and as a proof of its being ſtill more univerſal, LINNÆUS mentions its growing in *Arabia fœlix*.

A variety with a white flower now and then occurs.

If credit may be given to writers on the *Materia Medica*, it is a plant of conſiderable efficacy in medicine, particularly as an Aſtringent, hence it is recommended in all kinds of Hemorrhages; and thoſe who have the management of cattle, are ſaid to give them an infuſion of this plant when they make bloody urine.—Has not this practice originated from the doctrine of ſignatures? It is alſo celebrated as a vulnerary in ſchrophulous, cancerous, and putrid Ulcers, to which either the juice is applied, or the parts fomented with a decoction of the herb; as likewiſe in Contuſions, diſſolving the extravaſated blood when applied in the form of a Cataplaſm; and, laſtly, it is ſaid to be exhibited with good ſucceſs in the Stone and Gravel.—How far it merits theſe encomiums future experiments muſt determine.

The herb bruiſed and applied to places infeſted with Bugs, is ſaid by LINNÆUS to drive them away.



Geranium robertianum.



Polygonum aviculare.

1 2 3 4

POLYGONUM AVICULARE. BIRDS POLYGONUM, or KNOT-GRASS.

POLYGONUM *Linnæi Gen. Pl.* OCTANDRIA TRIGYNIA.

Cal. o. *Cor.* 5-*partita, Calycina.* *Sem.* 1. *angulatum.*

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO. (VEL APETALA POTIUS.)

POLYGONUM *aviculare* floribus octandris trigynis axillaribus, foliis lanceolatis, caule procumbente herbaceo. *Linn. Syſt. Vegetab. p.* 312. *Sp. Pl.* 519. *Fl. Suecic. n.* 339.

POLYGONUM procumbens, foliis linearibus, acutis, floribus ſolitariis. *Haller hiſt. n.* 1560.

POLYGONUM *aviculare.* *Scopoli Fl. Carniol. n.* 471.

POLYGONUM mas vulgare. *Gerard emac.* 451.

POLYGONUM mas vulgare majus. *Parkinſon* 443.

POLYGONUM ſeu Centinodia. *I. Bauhin* 3. 374. *Raii Syn. p.* 146. *Hudſon Fl. Angl. p.* 149.

RADIX annua, ſimplex, lignoſa, multis fibris donata, terram firmiter apprehendens ut extirpatu difficilis ſit, ſapore adſtringente.

ROOT annual, ſimple, woody, furniſhed with many fibres, taking ſtrong hold of the earth, ſo as to be with difficulty pulled up, and of an aſtringent taſte.

CAULES plures, plerumque procumbentes, interdum vero ſuberecti, dodrantales, ramoſi, tenues, ſtriati, læves, teretes, geniculati, ad geniculos paululum incraſſati.

STALKS ſeveral, generally procumbent, ſometimes nearly upright, about nine inches in length, branched, ſlender, ſtriated, ſmooth, round, jointed, the joints a little ſwelled.

FOLIA quam maxime variantia, ovata, lanceolata aut etiam linearia, alterna, lævia, e vaginis ſtipularum prodeuntia.

LEAVES varying exceedingly, oval, lanceolate, or ſometimes even linear, alternate, ſmooth, proceeding from the ſheaths of the Stipulæ.

STIPULÆ vaginantes, membranaceæ, albidæ, nitidæ, apice fibroſæ.

STIPULÆ forming a ſheath round the joints, membranous, white, ſhining, at top fibrous.

FLORES axillares, e vaginis ſtipularum cum foliis prodeuntia.

FLOWERS axillary, proceeding with the leaves from the ſheaths of the Stipulæ.

CALYX: PERIANTHIUM quinquepartitum, laciniis ovatis, concavis, patentibus, dimidio inferiore viridi, ſuperiore albo, ſæpe colorato, *fig.* 1, 2.

CALYX: a PERIANTHIUM divided into five ſegments, the laciniæ oval, concave, and ſpreading, the lower half green, the upper half white and often coloured, *fig.* 1, 2.

COROLLA nulla.

COROLLA wanting.

STAMINA: FILAMENTA octo, corolla breviora; ANTHERÆ flavæ, *fig.* 2, auct.

STAMINA: eight FILAMENTS ſhorter than the Corolla, ANTHERÆ yellow, *fig.* 2. magnified.

PISTILLUM: GERMEN triquetrum; STYLUS longitudine ſtaminum, trifidus; STIGMATA tria, rotunda, *fig.* 3. auct.

PISTILLUM: GERMEN triangular; STYLE the length of the Stamina, trifid; STIGMATA three, round, *fig.* 3, magnified.

SEMEN triquetrum, nigricans, intra calycem, *fig.* 4.

SEED triangular, of a blackiſh colour, contained within the Calyx, *fig.* 4.

Thoſe plants which have been obſerved to be eaten by cattle, have often obtained the name of *Graſs*, although they have not poſſeſſed the leaſt ſimilitude to thoſe which are real Graſſes, and the preſent plant is one of theſe. Cattle in general are fond of it, and hogs in particular eat it with great avidity. The ſeeds afford ſuſtenance to many of the ſmall birds, whence it has acquired the name of *aviculare*. The Caterpillar of the **Phalæna rumicis* (with us the *Knot-graſs Moth*) I have frequently found feeding on its leaves, although it is by no means confined to this plant: in *Sweden*, LINNÆUS informs us it feeds on the *Dock (Rumex)* and *Sow-thiſtle*.

This ſpecies of *Polygonum* may be conſidered as one of our moſt common plants; it delights to grow in a ſandy or gravelly ſoil, on banks, and by the ſides of roads and paths, being of quick growth, and ſpreading a great deal of ground; it often covers whole fields, that, by turning in of cattle, have had their natural coat of graſs deſtroyed.

Where a plant of this ſpecies happens to grow ſingly in a rich ſoil, it will often cover the ſpace of a yard or more in diameter, and the leaves become broad, and large; but when it grows very thick together, by the ſides of paths, it is in every reſpect ſmaller, and the ſtalks are more upright. It is ſubject, like moſt other plants, to ſeveral varieties, and of theſe are the *Polygonum brevi anguſtoque folio*, and the *Polygonum oblongo anguſtoque folio* of *C. Bauhine*.

It has been conſidered by ancient writers, as poſſeſſing ſome medical virtue, particularly as an Aſtringent, and is by them recommended in Diarrhœas, Dyſenteries, Bleeding at the noſe, and other Hemorrhages; but in the preſent practice, its uſe ſeems juſtly ſuperſeded by more efficacious medicines.

* *Vid. Linn. Faun. Suecic. p.* 318. *n.* 1200 *Roeſel. cl.* 2. *Pap. Noct. t.* 27. *Albin Inſect. pl.* 22.

LAPSANA COMMUNIS. NIPPLEWORT.

LAPSANA *Linnæi Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Receptaculum nudum. *Cal.* calyculatus, ſquamis ſingulis interioribus canaliculatis.

Raii Syn. Gen. 6. HERBÆ FLORE COMPOSITO NATURA PLENO LACTESCENTES.

LAPSANA *communis* calycibus fructus angulatis pedunculis tenuibus ramoſiſſimis. *Linnæi Syſt. Veg. p.* 602. *Sp. pl.* 1141. *Fl. Suecic. p.* 277.

LAMPSANA caule brachiato; foliis ovatis longe petiolatis; petiolis pinnatis. *Haller hiſt. n.* 6.

LAMPSANA *communis. Scopoli Fl. Carniol. n.* 988.

SONCHO affinis Lampſana domeſtica. *C. Bauhin pin. p.* 124.

LAMPSANA *Gerard. emac.* 255.

LAMPSANA vulgaris. *Parkinſon.* 810. *Raii Syn.* 173. *Hudſon Fl. Angl. p.* 303.

RADIX annua, ſimplex, fibroſa.

CAULIS erectus, rigidus, bicubitalis, ſtriatus, ramoſus, hirſutus.

FOLIA oppoſita, hirſutula, ad radicem et in ima parte caulis uno vel altero pinnularum pari donata, ſegmento terminali magno, ovato, dentato, ſuperiora oblonga, dentata.

CALYX: communis calyculatus, angulatus, lævis, ſquamæ ad baſin minimæ, erectæ, *fig.* 1.

COROLLA compoſita, imbricata, Corollulis hermaphroditis æqualibus; *propria* monopetala, ligulata, truncata, quinque dentata, *fig.* 2.

STAMINA: FILAMENTA quinque, capillaria, breviſſima; ANTHERÆ cylindracea, tubuloſa, *fig.* 2.

PISTILLUM: GERMEN oblongiuſculum; STYLUS filiformis, longitudine Staminum; STIGMA bifidum, reflexum, *fig.* 2.

SEMINA circiter octodecim, oblonga, paululum incurvata, pappo deſtituta, intra calycem, *fig.* 3, 4.

ROOT annual, ſimple, and fibrous.

STALK upright, rigid, about two cubits high, ſtriated, branched, hairy.

LEAVES oppoſite, ſomewhat hairy, at the root and on the lower part of the ſtalk furniſhed with one or two pair of pinnulæ; the ſegment which terminates the leaf large, oval, and indented; the upper leaves oblong and indented.

CALYX: the common Calyx ſmooth, and furniſhed at bottom with a few, minute, upright, ſquamulæ, *fig.* 1.

COROLLA compound, imbricated, the floſcules hermaphrodite and equal; each of them monopetalous, ligulate, truncated, and having five teeth, *fig.* 2.

STAMINA: five ſmall, and very ſhort FILAMENTS; ANTHERÆ uniting into a tube, *fig.* 2.

PISTILLUM: GERMEN oblong; STYLE filiform, the length of the Stamina: STIGMA bifid and turning back, *fig.* 2.

SEEDS about eighteen, oblong, a little bent in, without any down, contained within the Calyx, *fig.* 3, 4.

In gardens as a weed, this plant anſwers very well to the name of *Communis*, being in general too common. Nature ſeems amply to have ſupplied the want of pappus or down in the ſeeds, by the great number of them produced in each plant. It alſo occurs on the ſides of banks, and in all cultivated ground; flowering during moſt of the ſummer months.

According to RAY, it receives its name of *Nipplewort* from its efficacy in curing ſore nipples: no other virtues or uſes ſeem attributed to it.


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Aira aquatica.

AIRA AQUATICA. SWEET-TASTED WATER AIRA.

AIRA *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2 valvis, 2 florus. *Floſculi* abſque interjecto rudimento.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

AIRA *aquatica* panicula patente, floribus muticis lævibus calyce longioribus, foliis planis. *Linnæi Syſt. Vegetab. p.* 96. *Fl. Suecic. No.* 68.

POA locuſtis biſloris; glabris, florali gluma majori plicata, ſerrata. *Haller hiſt. No.* 1471.

AIRA *aquatica Scopoli Fl. Carniol.* 94. *Hudſon Fl. Angl.* 29.

AIRA culmo inferiore repente, floſculis muticis calyce longioribus, altero pedunculato. *Roy. lugdb.* 60.

GRAMEN caninum ſupinum paniculatum dulce. *Bauhin Pin.* 2.

GRAMEN miliaceum aquaticum. *Raii Syn.* 402. *Scheuchz. agr.* 218.

GRAMEN miliaceum fluitans ſuavis ſaporis. *Merret. Pin.*

RADIX perennis.

CULMUS baſi repit, ſurculoſque emittit more Feſtucæ fluitantis qui longe excurrunt et ad geniculos radiculas plures albas dimittunt; culmus demum erigitur, pedalis circiter, teres, erectus, fiſtuloſus, tener.

FOLIA latiuſcula, tenera, lævia, carinata, vaginæ ſtriatæ, ad baſin rubræ præcipue in ſurculis.

PANICULA erecta, diffuſa, laxa, racemi plures ex uno puncto, ſæpe flexuoſi.

SPICULÆ plerumque biflores, floſculo uno ſeſſili, altero pedunculato, purpurei, apicibus albidis, *fig.* 1.

CALYX: GLUMA bivalvis, valvulis inæqualibus, purpureis, lævibus, Corolla multo brevioribus, *fig.* 2.

COROLLA: GLUMA bivalvis, valvulis æqualibus, ſubtruncatis, plicatis ſive angulatis, *fig.* 3.

STAMINA: FILAMENTA tria capillaria, longitudine Corollæ; ANTHERÆ flavæ, *fig.* 3.

PISTILLUM: GERMEN ovatum; STYLI duo, plumoſi, *fig.* 4.

NECTARIUM GLUMULÆ duæ minimæ ad baſin Germinis, *fig.* 5.

SEMEN ovatum, intra Glumas arcte clauſum, *fig.* 7.

ROOT perennial.

STALK creeps at bottom, and ſends out young ſhoots like the Flote Feſcue graſs, which run out to a conſiderable diſtance, and ſend down ſmall white roots at the joints; it then becomes erect, grows to about a foot in height, is round, hollow, and tender.

LEAVES broadiſh, tender, ſmooth, carinated, the ſheaths ſtriated, red at bottom, particularly in the young ſhoots.

PANICLE upright, ſpreading, looſe; branches ſeveral, proceeding from one point, frequently crooked.

SPICULÆ generally contain two flowers, one of which is ſeſſile, and the other ſtands on a foot-ſtalk, purple, the tips white, *fig.* 1.

CALYX: a GLUME of two valves, the valves unequal, purple, ſmooth, and much ſhorter than the Corolla, *fig.* 2.

COROLLA: a GLUME of two valves, the valves equal, as if cut off at top, folded or angular, *fig.* 3.

STAMINA: three capillary FILAMENTS the length of the Corolla; ANTHERÆ yellow, *fig.* 3.

PISTILLUM: GERMEN oval; STYLES two, and feathery, *fig.* 4.

NECTARY two very minute GLUMES at the bottom of the Germen, *fig.* 5.

SEED oval, cloſely contained within the Glumes, *fig.* 7.

The ſame ſoil and ſituation which produces the *Feſtuca fluitans*, is productive alſo of this graſs; they both grow in gently-flowing ſtreams, or in wet boggy meadows; this circumſtance may ſerve among others to diſtinguiſh the *Aira aquatica* from ſome of the *Poas*, with which at firſt ſight the young botaniſt might eaſily confound it; it has however beſides this, many other characters which point it out more obviouſly. The bottom of the ſtalk uſually creeps on the ground, and when it gets into the water, it runs out like the *Feſtuca fluitans* to a conſiderable diſtance, throwing off roots and young ſhoots as it paſſes along, very much in the manner of that graſs: the ſtalk grows about a foot or more in height, is hollow and remarkably tender; the leaves are broader than any of the *Poas*, except the *Poa aquatica*, which is in every reſpect a much ſtronger plant: but what more eſpecially characterizes this graſs, is the purple or blueiſh colour of the Panicles, which is diſcernible even at a diſtance; and the ſweet taſte of the flowers if drawn through the mouth, whence this graſs has acquired the name of *Dulce*. Its parts of fructification likewiſe above deſcribed, diſtinguiſh it very ſtrongly; when dried and placed between papers, the flowers and ſeeds are very apt to fall off.

It flowers in June and July, and may be found almoſt every where in the ſituations above mentioned.

With reſpect to its uſes in rural œconomy, it is in every reſpect inferior to the *Flote feſcue graſs*, conſequently not worth cultivating for the uſe of cattle.

In a country like ours, where cultivation has made a conſiderable progreſs, the water plants are confined to a ſmall ſpace compared to what they occupied in a ſtate of nature; the draining of bogs and lakes, has rendered many large tracts in ſeveral parts of the kingdom, capable of producing corn and graſs, adapted to the uſe of cattle, which were formerly inacceſſible to man or beaſt. We ought not however to look on this or any other plant as made in vain, becauſe we do not immediately ſee the uſes they are applied to: ſeveral ſorts of waterfowl which abound in uninhabited countries, are expert gatherers of the ſeeds of the *aquatic graſſes;* and no leſs than five different ſpecies of *Muſcæ* or *Flies*, were produced from a few handfuls of the ſeeds of this graſs, which when I gathered it, were doubtleſs in their Pupa or Chryſalis ſtate: How little do we know of nature's productions!

SEDUM ALBUM. WHITE-FLOWERED STONECROP.

SEDUM *Linnæi Gen. Pl.* DECANDRIA PENTAGYNIA.
Cal. 5-fidus. *Cor.* 5-petala. *Squamæ* nectariferæ 5, ad baſin germinis. *Caps.* 5.
Raii Syn. Gen. 17. HERBÆ MULTISILIQUÆ SEU CORNICULATÆ.

SEDUM *album* foliis oblongis obtuſis teretiuſculis ſeſſilibus patentibus, cyma ramoſa. *Linn. Syſt. Vegetab. p.* 359. *Sp. Pl. p.* 619. *Fl. Suecic.* 153.

SEDUM caule glabro, foliis teretibus; umbellis ramoſis; floribus petiolatis. *Haller. hiſt. helv. n.* 959.

SEDUM *album. Scopoli Fl. Carn. p.* 324.

SEDUM minus teretifolium album. *Bauhin. p.* 283.

SEDUM minus officinarum. *Gerard. emac.* 512.

VERMICULARIS ſive craſſula minor vulgaris. *Parkinſon.* 734. *Raii Syn.* 271. *Hudſon. Fl. Angl. p.* 171. *Oeder. Fl. Dan. Icon.* 66.

RADIX perennis, fibroſa.

CAULES flexuoſe ſuper muros repent, dein eriguntur, triunciales circiter, folioſi, rubri.

FOLIA ſeſſilia, oblonga et fere cylindracea, obtuſa, non admodum conferta, patentia, carnoſa, glabra, ſæpius rubicunda.

INFLORESCENTIA: Flores petiolati, in CYMAM ramoſam confertam diſpoſiti.

CALYX: PERIANTHIUM pentaphyllum, foliolis brevibus, obtuſis, *fig.* 1.

COROLLA: PETALA quinque alba, acuminata, lineâ longitudinali rubra ſæpius notata, *fig.* 2.

NECTARIUM glandula minima ſquamiformis ad baſin ſinguli Germinis, *fig.* 6.

STAMINA: FILAMENTA decem alba, *fig.* 2, 3; ANTHERÆ rubræ.

PISTILLUM: GERMINA quinque, in STYLOS totidem acuminatos deſinentia; STIGMATA ſimplicia, *fig.* 4, 5.

PERICARPIUM: CAPSULÆ quinque minimæ acuminatæ introrſum dehiſcentes, *fig.* 7.

SEMINA parva, oblonga, *fig.* 8.

ROOT perennial and fibrous.

STALKS creep on the walls in a crooked form, then grow upright, about three inches high, leafy, and red.

LEAVES ſeſſile, oblong and almoſt cylindrical, obtuſe, but thinly placed on the ſtalk, ſpreading, fleſhy, ſmooth, and generally of a reddiſh colour.

INFLORESCENCE; Flowers ſtanding on foot-ſtalks, and diſpoſed in a thick-branched CYMA.

CALYX: a PERIANTHIUM of five leaves, which are ſhort and obtuſe, *fig.* 1.

COROLLA: five white PETALS, acuminated and generally marked with a longitudinal red ſtreak, *fig.* 2.

NECTARY a very minute ſquamiform gland at the baſe of each of the Germina, *fig.* 6.

STAMINA: ten white FILAMENTS, *fig.* 2, 3; ANTHERÆ deep red.

PISTILLUM: five GERMINA, terminating in ſo many acuminated STYLES; the STIGMATA ſimple, *fig.* 4, 5.

SEED-VESSEL: five ſmall acuminated CAPSULES opening inwardly, *fig.* 7.

SEEDS ſmall and oblong, *fig.* 8.

The *Sedum album* may be conſidered with us as rather a ſcarce plant; it is found here and there on the Walls about Town, particularly on the Chapel-wall in *Kentiſh-Town*, where it has grown for many years; alſo upon a Wall on the left-hand ſide leading from *Bromley* to *Bromley-Hall*, in *Middleſex*. It has been thought to poſſeſs ſufficient beauty to recommend it as a garden plant, and is accordingly, with very little trouble, cultivated in many of the gardens of the curious, nothing more being neceſſary than placing it in a pot filled with gravel or mould: in ſuch a ſituation it will grow, flouriſh, and propagate itſelf very faſt.

It has been called *album* from the colour of its flowers, which generally, however, have a tinge of red in them. It flowers in July. The round and oblong ſhape of its leaves readily diſtinguiſhes it from our other *Stonecrops*.

HALLER informs us, that it poſſeſſes all the virtues of the large *Houſeleek*, and that he has uſed the juice of it in uterine hæmorrhages, but does not inform us with what ſucceſs. By way of cataplaſm it is applied to the piles when in a painful ſtate, and is ſaid to have ſometimes been made the ſame uſe of in cancers with ſucceſs. By ſome it is eaten as a pickle.



Sedum Album.



Thymus acinos.

THYMUS *ACINOS.* BASIL THYME.

THYMUS *Linnæi Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.
Calycis bilabiati faux villis clauſa.
Raii Synop. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

THYMUS *Acinos* caulibus adſcendentibus, foliis dentato-ſerratis, calycibus baſi ventricoſis.

THYMUS *Acinos* floribus verticillatis, pedunculis unifloris caulibus erectis ſubramoſis, foliis acutis, ſerratis.
Linn. Syſt. Vegetab. p. 452. *Flor. Suecic. p.* 209.

CLINOPODIUM foliis ovatis acutis ſerratis, flore foliis breviore. *Haller. hiſt. helv. n.* 237.

THYMUS *Acinos. Scopoli Fl. Carniol. p.* 426. *n.* 735.

CLINOPODIUM arvenſe ocimi facie. *Bauhin. Pin. p.* 225.

CLINOPODIUM minus ſive vulgare. *Parkinſon.* 21.

OCYMUM ſylveſtre. *Gerard. emac.* 675.

ACINOS multis. *Bauhin. hiſt.* 32. 259. *Raii Syn. p.* 238. Wild Baſil. *Hudſon. Fl. Angl. p.* 230.

RADIX annua, ſimplex, fibroſa.
CAULES adſcendentes, ſemipedales, tetragoni, ramoſi, hirſuti, purpuraſcentes; RAMI cauli ſimiles, longi, patentes, imi oppoſiti.

FOLIA oppoſita, petiolata, ovato-acuta, medium interius petiolo proximum integrum, exterius mucroni proximum dentatum, marginespaululum reflexi, ciliati, nervo medio veniſque ſubtus hirſutis, ſuperne vix hirſuta, impunctata, venis quam in ſerpyllo profundius exaratis.

FLORES pedunculati, verticillati, ſpicati, plerumque ſex in ſingulo verticillo.
CALYX: PERIANTHIUM monophyllum, tubulatum, *baſi ventricoſum*, ſtriatum, hirſutum, quinquedentatum, dentibus tribus ſuperioribus brevioribus, reflexis, inferioribus ſetaceis, fauce villis clauſo, *fig.* 1.

COROLLA monopetala, tubuloſa, purpurea, bilabiata, labium ſuperius brevius, obtuſum, reflexum, emarginatum, inferius trifidum laciniis ſubrotundis, medio productiore ſubemarginato, *macula alba, lunulata, prominente, notata, fig.* 3, 4, 5.

STAMINA: FILAMENTA quatuor, quorum duo longiora, Corollâ breviora; ANTHERÆ parvæ, rubræ, *fig.* 6.
PISTILLUM: GERMEN quadripartitum; STYLUS filiformis longitudine Staminum; STIGMA bifidum, acutum, *fig.* 7.
PERICARPIUM nullum.
SEMINA quatuor oblonga intra Calycem, *fig.* 8, 9.

ROOT annual, ſimple and fibrous.
STALKS adſcending, about ſix inches high, ſquare, branched, hirſute, purpliſh; BRANCHES like the ſtalk, long, ſpreading, the bottom ones oppoſite.
LEAVES oppoſite, ſtanding on foot ſtalks, of a pointed oval ſhape, the inner middle part of them next the foot-ſtalks entire, the outer middle part next the point indented, the edges turned a little back and ciliated, the midrib and veins on the under ſide of the leaf hirſute, the upper ſurface of the leaves ſcarcely hairy, without any dots, the veins deeper than in the common Wild Thyme.
FLOWERS growing on foot-ſtalks, in whirls, forming a ſpike, generally ſix in each whirl.
CALYX: a PERIANTHIUM of one leaf, tubular, *bel'ying out at bottom*, ſtriated, hirſute, having five teeth, the three uppermoſt of which are ſhorteſt and turned back, the lower ones ſlender and tapering, the mouth cloſed up with ſhort hairs, *fig.* 1.
COROLLA monopetalous, tubular, purple, having two lips, the uppermoſt of which is ſhorteſt, blunt, turned back, with a ſlight notch in it; the lowermoſt divided into three roundiſh ſegments, the middle one of which is longer than the others, very ſlightly notched in, and marked with *a raiſed white ſemilunar ſpot, fig.* 3, 4, 5.
STAMINA: four FILAMENTS, two long and two ſhort, within the Corolla; ANTHERÆ ſmall and red, *fig.* 6.
PISTILLUM: GERMEN divided into four parts; STYLE filiform, the length of the Stamina; STIGMA bifid and acute, *fig.* 7.
SEED-VESSEL none.
SEEDS. Four oblong ſeeds within the Calyx, *fig.* 8. 9.

As there are only two ſpecies of *Thyme* growing wild in this Kingdom, and thoſe very different from each other, the young Botaniſt cannot be at a loſs in diſtinguiſhing them; with the *Thymus Alpinus* (figured by that accurate Botaniſt JACQUIN, in his *Fl. Auſtriac*, who has contributed much to the advancement of botanic knowledge) this plant has a much greater affinity, but may be diſtinguiſhed by attending to the ſize of the flowers and the ſhape of the Calyx: the flowers of the *Alpinus* are nearly twice as large as thoſe of the *Acinos*, and the Calyx of the latter has a protuberance at its baſe which we do not find either in the *Alpinus* or *Serpyllum*; a white circular mark in the mouth of the flowers makes the bloſſoms of this ſpecies ſtrikingly different from thoſe of Wild Thyme.

The moſt common place of growth for this plant is in uncultivated fields, particularly where the ſoil is chalky; about *Charlton* it is found in abundance, flowering in July and Auguſt.

A variety with a white flower ſometimes occurs.

The ſame agreeable aromatic flower predominates in this ſpecies as in the Wild Thyme, whence it is probable that their virtues are very ſimilar.

POLYGONUM HYDROPIPER. BITING PERSICARIA OR WATER PEPPER.

POLYGONUM *Linnæi Gen. Pl.* OCTANDRIA TRIGYNIA.
Cal. o. *Cor.* 5-partita, calycina. *Sem.* 1, angulatum.
Raii Syn. Gen. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

POLYGONUM *Hydropiper* floribus hexandris ſemidigynis; foliis lanceolatis, undulatis, immaculatis; ſpicis filiformibus nutantibus.

POLYGONUM *Hydropiper* floribus hexandris ſemidigynis, foliis lanceolatis, ſtipulis ſubmuticis. *Linn. Syſt. Vegetab. p.* 312.

POLYGONUM foliis ovato-lanceolatis, ſpicis florigeris, vaginis calvis. *Haller. hiſt. p.* 256. *n.* 1554.

POLYGONUM *Hydropiper. Scopoli Fl. Carniol. n.* 467.

PERSICARIA urens ſeu Hydropiper. *Bauhin. pin.* 101.

PERSICARIA vulgaris acris ſeu minor. *Parkinſon.* 856.

HYDROPIPER. *Gerard. emac.* 445. *Raii Syn. p.* 144. Water-pepper, Lakeweed or Arſmart. *Hudſon. Fl. Angl. p.* 148.

RADIX annua, fibroſa.
CAULIS erectus, ramoſus, baſi nonnunquam repens, pedalis ad tripedalem, geniculis incraſſatis, demum ruberrimus.
FOLIA lanceolata, *undulata*, e viridi flaveſcentia, glabra.

STIPULÆ ciliatæ.
FLORES ſpicati, *ſpicæ tenues, demum nutantes.*

CALYX: PERIANTHIUM quadripartitum, *glandulis minimis adſperſum*, laciniis obtuſis, concavis, *fig.* 1, 2, 3.
COROLLA nulla.
STAMINA: FILAMENTA ſex alba; ANTHERÆ albæ biloculares, *fig.* 3.
PISTILLUM: GERMEN ovatum; STYLUS bifidus, ad medium uſque diviſus; STIGMATA duo, rotunda, *fig.* 4, 5.
SEMEN ovato-acuminatum, caſtaneum, *fig.* 6.

ROOT annual and fibrous.
STALK upright, branched, ſometimes creeping at bottom, from one to three feet high, the joints ſwelled, finally becoming very red.
LEAVES lanceolate, *waved*, of a yellowiſh green colour and ſmooth.
STIPULÆ ciliated.
FLOWERS growing in ſpikes, *which are ſlender and finally drooping.*
CALYX: a PERIANTHIUM divided into four ſegments, *ſprinkled with very minute glands*, the ſegments blunt and hollow, *fig.* 1, 2, 3.
COROLLA wanting.
STAMINA ſix white FILAMENTS; ANTHERÆ white and bilocular, *fig.* 3.
PISTILLUM: GERMEN oval; STYLE bifid, divided down to the middle; two round STIGMATA, *fig.* 4, 5.
SEEDS of an oval-pointed ſhape, and cheſnut-colour, *fig.* 6.

It is one of the maxims laid down by the Author of that Syſtem of Botany which at preſent is ſo deſervedly held in eſteem, and which, I truſt, for the ſake of this delightful ſcience, will for ever withſtand the attempts of all thoſe who frame ſyſtems merely to raiſe themſelves into conſequence, that in all ſpecific deſcriptions taſte is to be excluded: ſome may perhaps be ready to treat this as too dogmatical; but, when they come to find that both the *Hydropiper* and *Sedum acre*, plants which in general are very hot and biting, ſometimes are found inſipid, they will readily adopt it as founded in ſtrict propriety.

The preſent ſpecies of Polygonum very properly receives its name of *Hydropiper*, from its hot and biting taſte, which appears to ariſe from its eſſential oil diſperſed in little cells or glands all over the plant, but more particularly obſervable on the Calyx with a ſmall magnifier, and which, if taſted, will be found to be more biting than any other part of the plant: this quality, which is peculiar to the *Hydropiper*, generally leaves a ſtrong idea of the plant on the mind of the Tyro: but it has other more invariable characters whereby it may be diſtinguiſhed. Notwithſtanding its obvious difference from the other plants of this genus, apparent even to ſuch as know very little of Botany, both SCOPOLI and HALLER ſeem to entertain doubts whether it be really diſtinct from the *P. Perſicaria* and *P. Minus*.

The three plants as they uſually grow, and I have ſeen them all three grow together, are certainly diſtinct enough: but there are ſome intermediate varieties which bring them very near together, and perhaps juſtify ſuch ſuſpicions: a variety of the *Hydropiper*, ſcarce differing in any other reſpect but its inſipidity, I have now and then met with in the ſame ſituation as we uſually find the true ſpecies: from the *P. Perſicaria* it differs principally in its leaves, ſpikes, form and ſize of its ſeeds; and firſt its leaves are of a yellower hue, more undulated, and never marked with any ſpots; its ſpikes are ſlender, and when the ſeeds are ripe they bend and hang down; the ſeeds are much larger, more acuminated, and of a cheſnut colour; its ſtipulæ are very evidently ciliated; though HALLER makes their want of ciliæ one of its ſtriking characters; and LINNÆUS alſo calls them *ſubmuticæ*, which certainly tends to miſlead.

It is the only *Perſicaria* that has any pretenſions to be an active medicine: given in infuſion or decoction, it proves diuretic; hence it is made uſe of in the Dropſy and Jaundice; and the diſtilled water of it is recommended by BOYLE as efficacious in the Stone and Gravel. LINNÆUS informs us, that the plant will dye Woollen cloth of a yellow colour.

Although the herb is ſo acrid, the ſeeds are inſipid and nutritive.

It is found in great abundance in all thoſe places which lie under water during the Winter, flowers in September, generally a month later than the *P. Perſicaria:* in expoſed places it becomes very red in going off.



Polygonum Hydropiper.

1 2 3 4 5 6



Euphrasia Odontites.

EUPHRASIA ODONTITES. RED EYE-BRIGHT.

EUPHRASIA *Linnæi Gen. Pl.* DIDYNAMIA ANGIOSPERMIA.
Raii Syn. Gen. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

EUPHRASIA *Odontites* foliis linearibus: omnibus ſerratis. *Linnæi Syſt. Vegetab. Sp. Pl. p.* 841. *Fl. Suecic. p.* 213. *n.* 544.

ODONTITES bractæis ſerratis hirſutis. *Haller. hiſt. v.* 1. *p.* 134. *n.* 304.

EUPHRASIA *Odontites. Scopoli Fl. Carniol. p.* 435.

EUPHRASIA pratenſis rubra. *Bauhin. Pin. p.* 234.

EUPHRASIA pratenſis rubra major. *Parkinſon.* 1329.

CRATÆOGONON Euphroſyne. *Ger. emac.* 91. *Raii Syn. p.** 284. Eye-bright Cow-wheat. *Hudſon. Fl. Angl. p.* 234.

RADIX annua, ſimplex, fibroſa, lignea.

CAULIS erectus, ramoſiſſimus, ſemipedalis ad bipedalem, hirſutus, obtuſe quadrangularis.

RAMI cauli ſimiles, oppoſiti.

FOLIA alterne oppoſita, ſeſſilia, lineari-lanceolata, reflexa, rariter dentata, hirſutula, venoſa, venis parvis, ſubtus hirſutis.

BRACTEÆ lanceolatæ, ſuberectæ, purpuraſcentes.

FLORES ſpicati, ſecundi, ſpicis apice ſubnutantibus.

CALYX: PERIANTHIUM monophyllum, tubuloſum, quadridentatum, hirſutum, dentibus æqualibus, acutis, *fig.* 1.

COROLLA monopetala, ringens, labium ſuperius concavum, ſubemarginatum, inferius tripartitum, laciniis obtuſis, æqualibus, *fig.* 2.

STAMINA: FILAMENTA quatuor, quorum duo paulo breviora, alba; ANTHERÆ bilobæ, biloculares, apice filamentoſæ, baſi ſpinulis duabus terminatæ, deorſum ubi filamentum inſeritur, appendiculis clavatis pluribus inſtructæ, *fig.* 3, 4, 5.

PISTILLUM: GERMEN ovatum, hirſutulum; STYLUS filiformis, in flore nondum explicato ſub labio ſuperiore Corollæ involutus, poſtea Corollâ longior; STIGMA capitatum, *fig.* 6.

PERICARPIUM: CAPSULA ovato-oblonga, compreſſa, bilocularis, *fig.* 7.

SEMINA plurima, albida, ſtriata, *fig.* 8.

ROOT annual, ſimple, fibrous, and woody.

STALK upright, very much branched, from ſix inches to two feet high, hirſute, and obtuſely ſquare.

BRANCHES like the ſtalk and oppoſite.

LEAVES alternately oppoſite, ſeſſile, betwixt linear and lanceolate, turning back, thinly indented, ſlightly hirſute, veiny, veins few and hirſute underneath.

BRACTEÆ lanceolate, nearly upright, purpliſh.

FLOWERS growing in ſpikes of a red colour, inclined all one way, the ſpikes nodding a little at top.

CALYX: a PERIANTHIUM of one leaf, tubular, quadridentate, hirſute, the teeth equal and ſharp, *fig.* 1.

COROLLA monopetalous, gaping, the upper lip concave and ſlightly notched in; the lower lip divided into three, obtuſe, equal ſegments, *fig.* 2.

STAMINA: four FILAMENTS, two ſomewhat longeſt, white; ANTHERÆ compoſed of two lobes and two cavities, at top thready, at bottom terminated by two little ſpines, and on the back part, where the filament is inſerted, furniſhed with ſeveral ſmall club-ſhaped threads or appendages, *fig.* 3, 4, 5.

PISTILLUM: GERMEN oval, hirſute; STYLE filiform, before the flower opens bent in underneath the upper lip of the Corolla; afterwards longer than the Corolla; STIGMATA forming a little head, *fig.* 6.

SEED-VESSEL an oval, oblong, flattiſh CAPSULE, of two cavities, *fig.* 7.

SEEDS ſeveral, whitiſh and ſtriated, *fig.* 8.

This ſpecies of *Eyebright*, which is exceedingly different from the common ſort, grows very common in Paſtures, ſometimes in Corn-fields, and flowers in July and Auguſt: it differs very much in ſize, according to the place it grows in, and is now and then found with white flowers.

It is not remarked either for its beauty or utility.

DIGITALIS PURPUREA. FOX-GLOVE.

DIGITALIS *Linnæi Gen. Pl.* DIDYNAMIA ANGIOSPERMIA.
Cal. 5-partitus. *Cor.* campanulata 5-fida, ventricosa. *Caps.* ovata bilocularis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

DIGITALIS *purpurea* calycinis foliolis ovatis acutis, corollis obtusis: labio superiore integro. *Lynn. Syst. Vegetab. p.* 570. *Sp. Pl. p.* 866.

DIGITALIS foliis calycinis ovatis, galea simplici. *Haller. hist. p.* 143. *n.* 330.

DIGITALIS *purpurea. Scopoli Fl. Carniol. p.* 447. *n.* 780.

DIGITALIS *purpurea* folio aspero. *p.* 243.

DIGITALIS *purpurea. Gerard. emac.* 790.

DIGITALIS *purpurea* vulgaris. *Parkinson.* 1653. *Raii Syn. p.** 283. Purple Fox-glove. *Hudson. Fl. Angl. p.* 240. *Oeder. Fl. Dan. Icon.* 774.

RADIX biennis, fibrosa.

CAULIS tripedalis ad orgyalem, simplex, erectus, foliosus, teres, pubescens.

FOLIA ovato-acuta, serrata, venosa, subtus albida, pubescentia; PETIOLI breves, alati.

FLORES spicati, nutantes, imbricati, secundi.

PEDUNCULI uniflori, pubescentes, apice incrassati, peractâ florescentiâ suberecti.

CALYX: PERIANTHIUM quinquepartitum, laciniis ovato-acuminatis, nervosis, supremâ angustiore, *fig.* 1.

COROLLA monopetala, subcampanulata, purpurea, interne ocellata; TUBUS magnus, patens, deorsum ventricosus, basi cylindracea, arcta; LIMBUS parvus, quadrifidus, laciniâ superiore integra quasi truncata, inferiore majore, inflexa.

STAMINA: FILAMENTA quatuor basi Corollæ inserta, alba, apice paululum latiora, basi infracta, quorum duo longiora; ANTHERÆ primum magnæ, turgidæ, ovatæ, basi coadunatæ, lutescentes, et sæpe maculatæ; demum et formâ et situ mire mutantur, *fig.* 2, 3, 4.

PISTILLUM: GERMEN subconicum, luteo-virens; STYLUS simplex; STIGMA bifidum, *fig.* 5, 6, 7.

NECTARIUM GLANDULA basin Germinis cingens, *fig.* 8.

PERICARPIUM: CAPSULA ovato-acuminata, bilocularis, bivalvis, valvulâ inferiore findente, *fig.* 9.

SEMINA plurima, nigricantia, parva, utraque extremitate truncata, *fig.* 10.

ROOT biennial and fibrous.

STALK from three to six feet high, simple, upright, leafy, round, and pubescent or downy.

LEAVES of a pointed oval shape, serrated, veiny, underneath whitish and pubescent; the FOOT-STALKS short and winged.

FLOWERS growing in a spike, pendulous, laying one over another all one way.

PEDUNCLES sustaining one flower, pubescent, thickest at top, after the flower drops off, becoming nearly upright.

CALYX: a PERIANTHIUM divided into five segments, which are of an oval-pointed shape, and nervous, the uppermost narrower than the rest, *fig.* 1.

COROLLA monopetalous, somewhat bell-shaped, purple, and marked in the inside with little eyes; the TUBE large, spreading, bulging out backwards; the base cylindrical, and as if it had been tied with a ligature; the LIMB small and quadrifid, the upper segment entire and as if cut off, the lower segment larger and bent in.

STAMINA: four FILAMENTS inserted into the bottom of the Corolla, white, a little broadest at top, crooked at bottom, two long and two short; ANTHERÆ at first large, turgid, oval, touching at bottom, of a yellowish colour and often spotted; lastly, changing both their form and situation in a singular manner, *fig.* 2, 3, 4.

PISTILLUM: GERMEN rather conical, of a yellow green colour; STYLE simple; STIGMA bifid, *fig.* 5, 6, 7.

NECTARY a GLAND surrounding the bottom of the Germen, *fig.* 8.

SEED-VESSEL: a pointed oval CAPSULE, of two cavities and two valves, the lowermost valve splitting in two, *fig.* 9.

SEEDS numerous, blackish, small, as if cut off at each end, *fig.* 10.

Was it not that we are too apt to treat with neglect the beautiful plants of our own country, merely because they are common and easily obtained, the stately and elegant *Fox-glove* would much oftener be the pride of our gardens than it is at present; for it is not only peculiarly striking at a distance, but its flowers and their several parts become beautiful in proportion to the nearness of our view. How singularly and how regularly do the blossoms hang one over another! how delicate are the little spots which ornament the inside of the flower! and like the wings of some of our small Butterflies smile at every attempt of the Painter to do them justice! how pleasing is it to behold the nestling Bee hide itself in its pendulous blossoms, while extracting its sweets, which furnish our tables with honey, and our manufacturers with wax! Nor are the more interior parts of the flower less worthy of our admiration, or less adapted to the improvement of the young Botanist: here all the parts of the fructification being large, he will readily obtain a distinct idea of them, but more particularly of the form of the Antheræ, and the alteration which takes place in them, previous to and after the discharge of the Pollen. *Vid. fig.* 3, 4.

The flowers of this plant are in general of a fine purple colour, and like all other purple flowers are liable to variations; sometimes we find the blossoms of a milk-white or cream colour, and some other varieties of it are mentioned by RAY, but the white is the most common. Such as would wish to cultivate it may raise it either from seed, which is very small for the size of the plant, or from young plants. It grows naturally in a dry and gravelly soil, and in such situations is common enough over most parts of England; about *Charlton-Wood* it is very plentiful, and flowers in July and August.

According to the testimony of many writers, the juice or decoction of this plant, taken inwardly, acts as an emetic and purgative, and that too with considerable violence; hence Mr. RAY very properly advises it to be given to such only as have robust constitutions. PARKINSON affirms, that it is very efficacious in the cure of the Epilepsy; but he unites with it, in his prescription, *Polypody of the Oak*, so that there is no knowing to which of the plants the merit of curing this stubborn disease is due.

The flowers or herb, either bruised or made into an ointment, are strongly recommended in scrophulous tumours and ulcers; and so great an opinion have the Italians of its virtues as a vulnerary, that they have the following proverb concerning it, "*Aralda tutte le piaghe salda.*" Fox-glove cures all wounds. *Raii Hist. Plant.*



Digitalis purpurea



Polygonum minus.

POLYGONUM MINUS. SMALL, CREEPING, NARROW-LEAVED PERSICARIA.

POLYGONUM *Linnæi Gen. Pl.* OCTANDRIA TRIGYNIA.

Cal. o. *Cor.* 5-partita calycina. *Sem.* 1, angulatum.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

POLYGONUM *minus* floribus hexandris, ſubmonogynis, foliis lineari-lanceolatis, caule baſi repente.

POLYGONUM *minus* hexandris digynis, foliis lanceolatis, ſtipulis ciliatis, caule divaricato patulo. *Hudſon. Fl. Angl. p.* 148.

POLYGONUM foliis ovato-lanceolatis, glabris, ſpicis ſtrigoſis, vaginis ciliatis. *Haller. hiſt. p.* 257. *n.* 1555.

PERSICARIA minor. *Bauhin. Pin.* 1014? anguſtifolia. *Bauhin. Pin.* 101. 3?

PERSICARIA puſilla repens. *Ger. emac.* 446. *Parkinſon.* 857. *Raii Syn.* 145. 2. Small Creeping Arſmart.

PERSICARIA anguſtifolia ex ſingulis geniculis florens. *Mer. Pin.* 90? *Raii Syn.* 145. 3. Narrow-leaved Lakeweed.

RADIX annua, fibroſa.

CAULES plures, dodrantales, aut pedales, *baſi repentes*, demum ſuberecti, geniculati (geniculis paululum incraſſatis), læves, rubicundi.

FOLIA *lineari-lanceolata*, pene avenia, ſuperne glabra.

STIPULÆ vaginantes, ciliatæ.

SPICÆ tenues, parum nutantes, e ſingulis geniculis prodeuntes.

CALYX: PERIANTHIUM quinquepartitum, perſiſtens, coloratum, laciniis obtuſis concavis, *fig.* 1.

COROLLA nulla.

STAMINA: FILAMENTA ſex; ANTHERÆ biloculares, albæ intra Corollam.

PISTILLUM: GERMEN ovatum aut triangulare; STYLUS filiformis, apice bifidus aut trifidus; STIGMATA duo aut tria, rotunda, reflexa, *fig.* 2, 3.

SEMEN aut ovato-acutum aut triangulare, caſtaneum, magnitudinis fere et formæ ſeminis Polygoni Perſicariæ, *fig.* 4, 5.

N. B. Omnes partes fructificationis lente augentur.

ROOT annual and fibrous.

STALKS ſeveral, about nine inches or a foot high, *creeping at bottom*, then becoming nearly upright, jointed (the joints ſomewhat thickened), ſmooth, of a reddiſh colour.

LEAVES *betwixt linear and lanceolate*, ſcarcely any appearance of veins, on their upper ſurface ſmooth.

STIPULÆ forming ſheaths round the joints, and ciliated.

SPIKES ſlender and a little drooping, proceeding from each joint of the ſtalk.

CALYX: a PERIANTHIUM divided into five ſegments, obtuſe and hollow, *fig.* 1.

COROLLA wanting.

STAMINA ſix FILAMENTS; ANTHERÆ bilocular, and white within the Corolla.

PISTILLUM: GERMEN oval or triangular; STYLE filiform, at top bifid or trifid; STIGMATA two or three, round and turned back, *fig.* 2, 3.

SEEDS oval or triangular, of a cheſnut colour, nearly of the ſame ſize and ſhape as the Polygonum Perſicaria, *fig.* 4, 5.

N. B. All the parts of the fructification are magnified.

If the opportunity of ſeeing this plant growing wild had ever occurred to the celebrated Swediſh Botaniſt, he would doubtleſs have conſidered it as a diſtinct ſpecies; at preſent he has placed it in the laſt edition of his works, the *Syſtema Vegetabilium*, as a variety of the *Polygonum Perſicaria*, probably miſled by dried ſpecimens of the plant: thoſe who truſt to ſuch are exceeding liable to deceive both themſelves and others, particularly in plants whoſe parts of fructification (from which it is ſometimes neceſſary to draw ſpecific differences) are very minute—thoſe in the living plants are with difficulty enough diſtinguiſhed, and in dried ſpecimens not to be inveſtigated.

Whoever has obſerved the appearance which the *Polygonum minus* and *Perſicaria* uſually put on, muſt have been ſtruck with the great diſſimilarity of the two in their general habits; and if they have taken the pains to examine the parts of fructification, they will, I am perſuaded, be convinced that both Mr. RAY and HUDSON are juſtifiable in making them diſtinct ſpecies.

It differs from the *Polygonum Perſicaria* in its ſize, growth of its ſtalk, ſhape of its leaves, form of its ſpikes, and diviſion of its Piſtillum. In height it ſeldom exceeds a foot, whereas the *Perſicaria* often occurs a yard high; the ſtalk of this ſpecies creeps at bottom, in the *Perſicaria* it never does: it is true, in the *Perſicaria*, and moſt of the *Polygonums*, a number of little roots puſh themſelves out at the joints, which are next the ground; but in this ſpecies the ſtalk at bottom is abſolutely procumbent, whilſt in the *Perſicaria* it is always upright; the leaves are much narrower, approaching rather to linear than lanceolate, and on their upper ſurface have much leſs appearance of veins than in the *Perſicaria*; the ſpikes, inſtead of being oval or nearly round, and upright, as in the *Perſicaria*, are ſlender and a little drooping: the Piſtillum, which is a part of very great conſequence in determining many of the ſpecies and varieties of this genus, is ſlightly divided at top only; while that of the *Perſicaria* is divided half way down; hence, as I have called that ſpecies *ſemidigynous*, I have called this *ſubmonogynous*.

Hitherto I have met with this plant growing wild no where but in *Tothill-fields*, *Weſtminſter*, where it makes ample amends for its ſcarcity elſewhere, being found in the greateſt abundance in the watery parts of thoſe fields, along with the *Siſymbrium ſylveſtre*, in the month of September, when it is in full bloom.

At preſent it does not appear that it has any thing more than its ſcarcity to recommend it to our notice.

ERICA TETRALIX. CROSS-LEAVED HEATH.

ERICA *Linnæi Gen. Pl.* OCTANDRIA MONOGYNIA.

Cal. 4-phyllus. *Cor.* 4-fida. *Filamenta* receptaculo inſerta. *Antheræ* bifidæ. *Caps.* 4-locularis.

Raii Syn. ARBORES et FRUTICES.

ERICA *tetralix* foliis quaternis ciliatis, floribus capitatis imbricatis.

ERICA *tetralix*, antheris ariſtatis, corollis ovatis, ſtylo incluſo, foliis quaternis ciliatis, floribus capitatis. *Linn. Syſt. Vegetab. p.* 302. *Fl. Suecic. n.* 337.

ERICA ex rubro nigricans ſcoparia. *Bauhin. Pin.* 486.

ERICA Brabantica folio Coridis hirſuto quaterno. *I. B.* 1. 358.

ERICA pumila Belgarum Lobelio, ſcoparia noſtras. *Parkinſon.* 1482.

ERICA major flore purpureo. *Gerard emac.* 1382. *Raii Syn. p.* 471. Low Dutch Heath or Beſome Heath. *Hudſon Fl. Angl. p.* 144. *Oeder Fl. Dan. icon.* 81.

CAULES fruticoſi, dodrantales aut pedales, ramoſi, fuſci, ſcabriuſculi ex relictamentis foliorum.

STALKS ſhrubby, about nine or twelve inches high, branched, roughiſh from the remains of the leaves which have fallen off.

FOLIA *quaterna*, ovato-linearia, patentia, prope flores cauli adpreſſa, marginibus inflexis, *ciliatis*, ciliis glandulâ terminatis, ſuperficie ſuperiore plana, inferiore concava.

LEAVES growing by fours, of an oval-linear ſhape, ſpreading, near the flowers preſſed cloſe to the ſtalk, the edges turned in and *ciliated or hairy*, each of the hairs terminating in a ſmall round globule, the upper ſurface flat, the inferior ſurface concave.

FLORES ſecundi, imbricati, in capitulum congeſti, carnei.

FLOWERS hanging down one over another all one way, forming a little head, of a pale red colour.

CALYX: PERIANTHIUM hexaphyllum, foliolis hirſutis, duo inferiora ovato-lanceolata, cætera linearia, *fig.* 2.

CALYX: a PERIANTHIUM of ſix leaves, the leaves hairy, the two lowermoſt of an oval-pointed ſhape, the reſt linear, *fig.* 2.

COROLLA ovata, monopetala, ore quadrifido, laciniis reflexis, *fig.* 3.

COROLLA oval, monopetalous, the mouth divided into four ſegments, which turn back, *fig.* 3.

STAMINA: FILAMENTA octo, ſubulata, alba, corollâ breviora, receptaculo inſerta; ANTHERÆ ſagittatæ, conniventes, purpureæ, biforaminoſæ, bicornes, *fig.* 4, 5, 6.

STAMINA: eight FILAMENTS, tapering, white, ſhorter than the Corolla, inſerted into the receptacle; ANTHERÆ arrow-ſhaped, cloſing together, purple, having two apertures for the diſcharge of the Pollen, and two little horns, *fig.* 4, 5, 6.

PISTILLUM: GERMEN cylindraceum, ſubſulcatum, villoſum, glandulâ ad baſin cinctum, *fig.* 7, 8. STYLUS filiformis, purpuraſcens, *fig.* 9. STIGMA, obtuſum, *fig.* 10.

PISTILLUM: GERMEN cylindrical, ſlightly grooved, villous, ſurrounded at bottom by a gland, *fig.* 7, 8. STYLE filiform, purpliſh, *fig.* 9. STIGMA blunt, *fig.* 10.

PERICARPIUM: CAPSULA ſubrotunda, villoſa, apice truncata, quadrivalvis, *fig.* 11, 12.

SEED-VESSEL: a roundiſh CAPSULE covered with a kind of down, cut off as it were at top, having four valves, *fig.* 11, 12.

SEMINA plurima, minuta, flaveſcentia, *fig.* 13, 14.

SEEDS numerous, minute, and yellowiſh, *fig.* 13, 14.

This ſpecies of *Heath*, though not applicable to ſuch a variety of uſes as ſome of the others, is not inferior to any of them in the beauty and delicacy of its flowers, which in general are of a pale red colour, but ſometimes they occur entirely white.

It is obviouſly enough diſtinguiſhed from the reſt, not only by its flowers growing in a kind of pendulous cluſter on the tops of the ſtalks, but by its leaves alſo, which growing by fours on the ſtalk, form a kind of croſs; theſe are edged with little ſtiff hairs, each of which has a ſmall globule at its extremity.

At the latter-end of the Summer, it contributes its ſhare with the others to decorate and enliven thoſe large tracts of barren land which too often meet the eye in many parts of this kingdom.

It delights to grow in a moiſter ſituation than ſome of the others, and will thrive well enough in gardens, if taken up either in Spring or Autumn with a quantity of earth about its roots: this is neceſſary, as the *Heaths* in general bear tranſplanting ill.



Erica tetralix


Alsine media

ALSINE MEDIA. COMMON CHICKWEED.

ALSINE *Linnæi Gen. Pl.* PENTANDRIA TRIGYNIA.

Cal. 5-phyllus. *Petala* 5-æqualia. *Caps.* 1-locularis, 3-valvis.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

ALSINE *media. Linnæi Syſt. Vegetab. p.* 246. *Flora Suecic. p.* 37.

ALSINE foliis petiolatis, ovato lanceolatis, petalis bipartitis. *Haller hiſt. helv. n.* 880.

ALSINE *media. Scopoli Fl. Carniol. n.* 376.

ALSINE *media. Bauhin Pin. p.* 250.

ALSINE *media* ſeu minor. *Gerard emac.* 611. *Raii Syn. p.* 347. Common Chickweed. *Hudſon Fl. Angl. p.* 113. *Oeder Fl. Dan.* 525, 438.

RADIX annua, fibroſa, capillacea.

CAULES plures, tenelli, teretes, ſubrepentes, ramoſi, viticulis geniculati, *unifariam hirſuti*, apicibus ſenſim incraſſatis.

FOLIA ovato-acuta, glabra, leviter ciliata; inferiora petiolata, ſuperiora ſeſſilia, connata.

PETIOLI ad baſin latiora, hirſuti.

PEDUNCULI uniflori, axillares, hirſuti, peractâ floreſcentiâ penduli, demum erecti.

CALYX: PERIANTHIUM pentaphyllum, foliolis lanceolatis, concavis, ſubcarinatis, marginatis, hirſutis, *Petalis longioribus, fig.* 1.

COROLLA: PETALA quinque, alba, nitida, ad baſin fere partita, *fig.* 3, 4, 5.

STAMINA: FILAMENTA quinque, alba, inter Petala locata, Glandulâ ad baſin inſtructa; ANTHERÆ ſubrotundæ, purpuraſcentes, *fig.* 5, 6.

PISTILLUM: GERMEN ſubovatum; STYLI tres filiformes; STIGMATA ſimplicia, *fig.* 7.

PERICARPIUM: CAPSULA unilocularis, in valvulas ſex dehiſcentes, *fig.* 8.

SEMINA octo ad quindecem, ſubreniformia, aſpera, e fuſco-aurantiaca, pedicellis receptaculo connexa, *fig.* 9, 10, auct.

ROOT annual, fibrous, capillary.

STALKS numerous, tender, round, ſtriking root here and there, branched, jointed and ſtringy, *hairy on one ſide only*, growing thicker towards the top.

LEAVES of a pointed oval ſhape, ſmooth, ſlightly hairy at the edges, the lowermoſt ſtanding on foot-ſtalks, the uppermoſt ſeſſile, connate.

FOOT-STALKS of the leaves broadeſt at bottom, and hairy.

FOOT-STALKS of the flowers, each ſuſtaining one flower, proceeding from the boſoms of the leaves, hairy, when the flowering is over hanging down, finally becoming upright.

CALYX: a PERIANTHIUM of five leaves, each of which is lanceolate, concave, ſlightly keel-ſhaped at bottom, with a margin at the edge, hairy, *and longer than the Petals, fig.* 1.

COROLLA conſiſts of five white ſhining PETALS, divided nearly to the baſe, *fig.* 3, 4, 5.

STAMINA: five white FILAMENTS, placed betwixt the Petals, furniſhed at bottom with a little Gland; ANTHERÆ roundiſh, of a purpliſh colour, *fig.* 5, 6.

PISTILLUM: GERMEN ſomewhat oval; STYLES three, filiform; STIGMATA ſimple, *fig.* 7.

SEED-VESSEL a CAPSULE of one cavity, ſplitting into ſix valves, *fig.* 8.

SEEDS from eight to fifteen, ſomewhat kidney-ſhaped, of a browniſh orange colour, with a rough ſurface, connected to the receptacle by little foot-ſtalks, *fig.* 9, 10, magnified.

Chickweed being a plant which will grow in almoſt any ſituation, is conſequently liable to aſſume many different appearances: when it grows in a rich ſoil, and ſhady ſituation, it will frequently become ſo large as to reſemble the *Ceraſtium aquaticum;* while, at other times, on a dry barren wall, its leaves and ſtalks will be ſo minute, as to make the young botaniſt take it for ſome ſpecies different from the common *Chickweed:* happily, however, it affords marks which, if attended to, will readily diſtinguiſh it from the *Ceraſtium,* and every other plant. Excluſive of its differing from the *Ceraſtium* in its generic character, its Petals are ſhorter than the leaves of its Calyx; while in the *Ceraſtium* they are longer; hence a conſiderable difference will be obſervable, at firſt ſight, in the ſize of the flowers of theſe two plants: and, from all other plants related to it, it may be diſtinguiſhed by the ſingular appearance of its ſtalk, which is *alternately hairy on one ſide only.*

The moſt common number of its *Stamina* with us is five; yet I have often ſeen it with leſs, and ſometimes with more; and this inconſtancy in the number of its Stamina has been noticed by moſt botanic writers: GOUAN, in his *Flor. Monſpel.* mentions from 3 to 10, with as many Piſtilla; this circumſtance with reſpect to the number of its Stamina, unfortunately ſeparates it from other plants with which it appears to have by nature a very near relation: but as five Stamina appear to be its moſt conſtant number, LINNÆUS could not have placed it amongſt thoſe plants with ten Stamina, without doing violence to his ſyſtem.

Of annual plants there are few more troubleſome: it ſows itſelf plentifully in the Summer, and remains green throughout the Winter, flowering during the whole time, if the weather be mild: but its chief ſeaſon for flowering is in the Spring. In rich garden mould, where the ground is highly cultivated, and in the fields about town, it does a deal of miſchief: by the quickneſs of its growth and the great number of its ſhoots, it covers and chokes many young plants; hence it ſhould be carefully weeded from dunghills.

The ſeeds are very beautiful, and have the greateſt affinity to thoſe of the *Ceraſtium aquaticum.*

When the flowers firſt open, the foot-ſtalks which ſupport them are upright; as the flowers go off, they hang down; and when the ſeeds become ripe, they again become erected.

LINNÆUS has obſerved that the flowers open from nine in the morning till noon, unleſs rain falls on the ſame day, in which caſe they do not open: from what little obſervations I have made on this plant, it is not ſubject to be affected preciſely in the ſame manner here, having ſeen in the month of March, the bloſſoms continue rather widely expanded after repeated ſhowers of rain.

It is conſidered as a wholeſome food for Chickens and ſmall Birds, whence, as RAY obſerves, it has obtained its name: boiled, it reſembles Spinach ſo exactly, as ſcarcely to be diſtinguiſhed from it, and is equally wholeſome; being a plant which may be procured almoſt any where very early in the Spring, it may be no bad ſubſtitute where Spinach or other greens are not to be had in plenty, and much preferable to Nettle-tops and other plants, which the lower ſort of people ſeek after in the Spring with ſo much avidity. Swine are very fond of it, and prefer it to Turnip-tops. It is eaten by many Inſects, particularly by the Caterpillar of the *Phalæna Villica* or *Cream Spot Tyger Moth,* and other hairy Caterpillars of the Tyger kind.

As a medicine it contains no active principle; but is frequently applied to hot, painful, and inflammatory ſwellings, either by itſelf, bruiſed, or mixed with poultices, with good ſucceſs.

POLYGONUM PENSYLVANICUM. PALE-FLOWERED PERSICARIA.

POLYGONUM *Linnæi Gen. Pl.* OCTANDRIA TRIGYNIA.
Raii Syn. Gen. 5. HERBÆ FLORE IMPERFCTO SEU STAMINEO (VEL APETALA POTIUS.)

POLYGONUM floribus hexandris, digynis; ſtipulis muticis; pedunculis ſcabris; ſeminibus utrinque depreſſis.

POLYGONUM floribus octandris digynis, pedunculis hiſpidis, foliis lanceolatis, ſtipulis muticis. *Linnæi Syſt. Vegetab. Sp. Plant. p.* 519.

PERSICARIA mitis major foliis pallidioribus. *D. Bobarti, Dead Arſmart the greater with pale leaves. Raii Syn. ed.* 3. *p.* 145. *Hudſon Fl. Angl. p.* 148.

RADIX fibroſa, annua.
CAULIS tripedalis circiter, teres, glaber, fiſtuloſus, ramoſus; rami patentes, geniculis maxime incraſſatis.
FOLIA ovato-lanceolata, ſupra glabra, ſubtus glandulis punctata, ſæpe pubeſcentia, ciliata, nunc maculata nunc immaculata.

PETIOLI ſubtus hirſuti, ſcabriuſculi.

STIPULÆ baſi nervoſæ, muticæ.

PEDUNCULI pilis brevibus glanduliferis ſcabri, *fig.* 1.

FLORES herbacei, pedunculis brevibus inſidentes, denſe glomerati, ſpicæ ovatæ, ſeminibus maturis ſubnutantes.

CALYX: PERIANTHIUM quinquepartitum, laciniis ovatis, obtuſis, *fig.* 2, 3.
COROLLA nulla.
STAMINA: FILAMENTA ſex, ſubulata, alba, Corollâ paulo breviora; ANTHERÆ biloculares; POLLEN globoſum, *fig.* 4.
PISTILLUM: GERMEN ſubovatum; STYLUS fere ad baſin diviſus; STIGMATA duo, ſubrotunda, *fig.* 5, 6.
SEMEN cordatum, acuminatum, compreſſum, *medio depreſſum*, nitidum, *fig.* 9, 10, magnit. nat. *fig.* 7, 8, lente auct. ſubinde obtuſe triquetrum, *fig.* 12.

ROOT fibrous and annual.
STALK about three feet high, round, ſmooth, hollow, branched, the branches ſpreading, and the joints very much ſwelled.
LEAVES of an oval pointed ſhape, ſmooth on their upper ſurface, underneath dotted with ſmall glands, and often downy, edged with little hairs, ſometimes with and ſometimes without ſpots.
FOOT-STALKS of the leaves hairy underneath, with a ſlight roughneſs to the touch.
STIPULÆ rib'd at bottom, and not terminated by any hairs.
FOOT-STALKS of the flowers rough with little glands, *fig.* 1.
FLOWERS of a greeniſh colour, ſitting on ſhort foot-ſtalks, and growing thickly together; ſpikes oval, and when the ſeeds are ripe drooping a little.
CALYX: a PERIANTHIUM divided into five ſegments, which are oval and obtuſe, *fig.* 2, 3.
COROLLA wanting.
STAMINA: ſix FILAMENTS, tapering, white, a little ſhorter than the Corolla; ANTHERÆ biocular; POLLEN globular, *fig.* 4.
PISTILLUM: GERMEN ſomewhat oval; STYLE divided nearly down to the baſe; STIGMATA two, roundiſh, *fig.* 5, 6.
SEED heart-ſhaped, pointed, flat, *with a depreſſion in the middle*, ſhining, *fig.*9, 10, of its natural ſize, *fig.* 7, 8, magnified, ſometimes obtuſely triangular, *fig.* 12.

The plant here figured, is the *Perſicaria mitis major foliis pallidioribus, D. Bobarti*, and which is particularly deſcribed in the 3d edition of RAY's *Synopſis, p.* 145: from the conſonancy of this deſcription, with that which LINNÆUS had given of the *Polygonum Penſylvanicum*, in the 3d edition of his *Species Plantarum*, Mr. HUDSON ſet it down in his *Flora*, as that ſpecies: and LINNÆUS, in the laſt edition of his *Syſtema Vegetab.* as a confirmation of our Engliſh *Polygonum*'s being the ſame with his *Penſylvanicum*, quotes BOBART's deſcriptive name.

By RAY, LINNÆUS, and HUDSON, then, it is made a diſtinct ſpecies; by HALLER it is conſidered as a variety of the *Polygonum Perſicaria;* but as the Baron forms his judgment from dried ſpecimens that were ſent him, in which many of the diſtinguiſhing characters of this plant would be unavoidably loſt, he ſeems the moſt likely to be miſtaken: I ſhall therefore join in making it a diſtinct ſpecies; and, I truſt, ſhall give ſuch ſtriking additional characters, as will ſettle this matter beyond diſpute.

The true *Polygonum Penſylvanicum* (for there are ſeveral varieties of it) has the greateſt affinity with the *Polygonum Perſicaria*, but differs from it in the following particulars, *viz.* place of growth, ſize, ſtipulæ, leaves, foot-ſtalks of the leaves, foot-ſtalks of the flowers, ſtyle, and ſeeds.

While the *Polygonum Perſicaria* uſually delights to grow by the ſides of moiſt ditches, the *Penſylvanicum* prefers a richer and more luxuriant ſoil; and ſo common is it with us about town, that there is ſcarce a dunghill on which it may not be found: indeed in its attachment to this particular ſoil, it reſembles many of the *Chenopodiums* or *Oraches*. Was it never to occur in other ſituations, ſome might be ready to ſuſpect that it was a variety of the *Perſicaria* ariſing from richneſs of ſoil; but it is frequently found in other places: and I remember once to have ſeen the *Polygonum Perſicaria*, *Hydropiper*, and *Penſylvanicum*, all growing by the ſide of a ſtream within ſix inches of each other.

In its moſt common ſtate it is much larger than the *Polygonum Perſicaria*, and its joints in particular are more ſwelled; its Stipulæ are much more ſtrongly ribbed at bottom, and have no Ciliæ; its leaves are broader, the veins ſomewhat deeper, and more ſtrongly marked; the hairs on the edges of the leaves more viſible, but particularly ſo under the foot-ſtalk of the leaf, to which they give a manifeſt roughneſs: in the uppermoſt leaves the under ſide is generally dotted with very minute glands, while in the lowermoſt it is covered with a kind of down: this laſt character, though contrary to what LINNÆUS aſſerts, is never ſeen in the *Polygonum Perſicaria;* but in this ſpecies it is always more or leſs predominant. The foot-ſtalks of the flowers are thickly beſet with little yellowiſh glands, ſtanding on ſhort foot-ſtalks, which ſometimes extend half down the plant; this appearance never, or exceeding rarely, occurs in the *Polygonum Perſicaria:* the flowers are of a pale or greeniſh hue, and form thicker and larger ſpikes than in the *Polygonum Perſicaria*, and, when ripe, are ſo heavy as frequently to hang down a little: the Style is divided very nearly down to the Germen, while in the *Polygonum Perſicaria* it is divided only half way; and *this diviſion of the Style*, I look upon as one of the moſt conſtant and certain criteria of this ſpecies: laſtly, the form of the ſeeds contributes not a little to the farther aſcertaining and fixing it: in the *Perſicaria*, the ſeeds are either triangular, or of a pointed oval ſhape, with a little *convexity* on each ſide; in this ſpecies, it is in general flat, with a *depreſſion* on each ſide; it is alſo larger and broader; now and then a ſeed occurs, forming an unequal triangle, but theſe are very rare, while the triangular ſeed is moſt frequent in the *Polygonum Perſicaria*.



Polygonum Pensylvanicum



Polygonum Pensylvanicum var. caule maculato.

POLYGONUM PENSYLVANICUM. VAR. CAULE MACULATO.

SPOTTED-STALK'D PERSICARIA.

PERSICARIA latifolia geniculata, caulibus maculatis. *D. Rand. Raii Syn. p.* 145.

PERSICARIA maculoſa procumbens foliis ſubtus incanis. *Raii Syn. p.* 146. eadem eſt planta ſolo autem minus læto proveniens.

Such then is the difference, which, from repeated examinations, I have been able to diſcover betwixt the *Polygonum Perſicaria* and the *Penſylvanicum* in its moſt common ſtate; in this ſtate however it does not always occur, but is ſubject to more Varieties than any of our other *Perſicarias:* without any deſire of multiplying them, I make the following, having found them all about *London:*

1 *Polygonum Penſylvanicum. var.* *caule et floribus rubris.*
2 ..... *caule maculato.*
3 ..... *foliis ſubtus incanis.*

The firſt of theſe varieties is very often found with the true ſpecies on dunghills, as alſo in corn-fields, and is like it in every reſpect excepting its colour, the ſtalks and flowers being red, but not ſo beautifully bright as thoſe of the *Polygonum Perſicaria.*

The ſecond variety here figured, which indeed comes near to a diſtinct ſpecies, grows much in the ſame ſituations, and oftentimes with the *Polygonum Perſicaria* in the ditches about *St. George's-Fields,* particularly in a large ditch on the right-hand ſide of the road between the end of *Blackman-Street* and *Newington,* where it is very common in the month of *September.* It not only differs from the other in having its ſtalk ſpotted with red, a character which it keeps very conſtantly, but its ſpikes are much ſlenderer, rather more ſo even than thoſe of the *Perſicaria,* of a red colour, but not quite ſo bright as thoſe of that plant: the under ſide of the foot-ſtalk of the leaves is remarkably rough; the little glands on the foot-ſtalks of the flowers, and the parts of the fructification are ſimilar to thoſe of the true ſpecies, but the ſeeds are ſmaller: when this variety grows in the rich ſoil above mentioned, it is full as large as the *Penſylvanicum* itſelf; but when it grows in a different ſoil and ſituation, as on the watery parts of *Blackheath* and *Peckham-Rye,* it becomes much ſmaller, generally has its leaves white underneath, and will certainly be taken for the *Polygonum Perſicaria,* if not attentively examined: its ſpotted ſtalk, and the roughneſs of the foot-ſtalks of the leaves, will, however, readily diſcover it.

The third variety, with leaves hoary on the under ſide, is found here and there in corn-fields and other places, where the ſoil is not very rich, and is obviouſly enough diſtinguiſhed.

Beſides theſe ſtriking varieties, it is ſubject, like all other plants, to vary in ſize according to the richneſs or poverty of the ground on which it grows, and like the *Polygonum Perſicaria,* its leaves are ſometimes ſpotted and ſometimes not.

This deſcriptive account, will, perhaps, appear tedious and unintereſting to ſome; if, however, by theſe practical obſervations, the obſcurity which has hitherto dwelt on this difficult Genus, ſhall in ſome degree be removed, and the road of inveſtigation made eaſier to the young Botaniſt, I ſhall think my time uſefully employed; I would not, however, wiſh him to take upon truſt what is here advanced, but to examine each plant and its ſeveral parts for himſelf; thus he will become improved, and be able, perhaps, to throw a ſtill greater light on the ſubject.

The Sparrow and other ſmall birds are very fond of the ſeeds of this ſpecies and its varieties: but the Farmer ſhould carefully weed them from his dunghills.

EUPHORBIA HELIOSCOPIA. SUN SPURGE, or WART WORT.

EUPHORBIA *Linnæi Gen. Pl.* DODECANDRIA TRYGYNIA.

Cor. 4-ſ. 5-petala, calyci inſidens. *Cal.* 1-phyllus, ventricoſus. *Capſ.* 3-cocca.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ, FLORE TETRAPETALO ANOMALÆ.

EUPHORBIA umbella quinquefida : trifida : dichotoma, involucellis obovatis, foliis cuneiformibus ſerratis. *Linn. Syſt. Vegetab. p.* 377. *Sp. Plant.* 658. *Fl. Suecic. p.* 162.

TITHYMALUS foliis petiolatis, ſubrotundis, ſerratis, ſtipulis rotundis, ſerratis. *Haller hiſt. v.* 2. *p.* 10. *n.* 1050.

TITHYMALUS *helioſcopius. Scopoli Fl. Carniol. p.* 337. *n.* 579.

TITHYMALUS *helioſcopius. Bauhin. Pin.* 291. *Gerard emac.* 458. *Parkinſon.* 189.

TITHYMALUS *helioſcopius* ſive ſoliſequus. *I. B.* 3. 669. *Raii Syn.* 313. *Hudſon Fl. Angl. p.* 183.

RADIX ſimplex, fibroſa, annua.

ROOT ſimple, fibrous, annual.

CAULIS erectus, teres, piloſus, inferne brachiatus, brachiis oppoſitis.

STALK upright, round, ſlightly hairy, below branched, the branches oppoſite.

FOLIA ſparſa, pauca, glabra, *ſerrata*, cuneiformia, inferiora petiolata, ſuperiora ſeſſilia.

LEAVES growing in no regular order, few, ſmooth, *ſerrated*, and wedge-ſhaped, the lower ones ſtanding on foot-ſtalks, the upper ones ſeſſile.

UMBELLA quinquefida, trifida, dichotoma, patens, faſtigiata.

UMBELL dividing into five, next three, then two, ſpreading, of an equal height at top.

STIPULÆ minute ſerratæ, glabræ, UMBELLÆ quinque, obovatæ, horizontales, æquales, *Umbellulæ* tres, ovatæ, inæquales, interiore duplo minore, quæ ſequuntur mucrone terminatæ.

STIPULÆ minutely ſerrated and ſmooth, thoſe of the UMBELL five, ſomewhat oval, ſpreading horizontally, and equal ; thoſe of the *ſmaller* UMBELL three, oval, unequal, the interior one twice as ſmall as the others ; thoſe which follow terminating in a point.

CALYX ſubventricoſus, flaveſcens, *fig.* 1.

CALYX ſomewhat ſwelled, of a yellowiſh colour, *fig.* 1.

COROLLA nulla.

COROLLA wanting.

NECTARIA quatuor, ſubrotunda, nuda, *fig.* 2.

NECTARIA four, roundiſh and naked, *fig.* 2.

STAMINA : FILAMENTA duo, tria, aut plura, viſibilia, exſerta ; ANTHERÆ flavæ, biloculares, loculis ſubrotundis, *fig.* 3.

STAMINA : two, three, or more FILAMENTS, viſible beyond the Calyx ; ANTHERÆ yellow, bilocular, the cavities containing the Pollen roundiſh, *fig.* 3.

PISTILLUM : GERMEN pedunculatum, ſubrotundum, nutans ; STIGMATA tria, apice bifida, *fig.* 4, 5.

PISTILLUM : GERMEN placed on a foot-ſtalk, roundiſh, hanging down ; STIGMATA three, bifid at top, *fig.* 4, 5.

PERICARPIUM : CAPSULA tricocca, trilocularis, trivalvis, *fig.* 6.

SEED-VESSEL a CAPSULE of three protuberating valves, and three cavities, *fig.* 6.

SEMEN unicum in ſingulo loculamento, ovatum, rugoſum ex purpureo fuſcum, *fig.* 7.

SEEDS one in each cavity, oval, wrinkled, of a purpliſh brown colour, *fig.* 7.

In ſpeaking of the *Euphorbia Peplus*, I had occaſion to take notice of the difficulty which Students in Botany find in inveſtigating the *Claſs* and *Order* of this Genus, and endeavoured to make it eaſier to them : in this plant, the parts of the fructification are ſomewhat larger ; and it differs from the other Spurges in having its leaves finely ſerrated. In its acrimonious quality it is inferior to none ; hence it has often been applied to Warts for the purpoſe of deſtroying them ; but even in this caſe, great care ſhould be uſed in its application. My friend Mr. WILLIAM WAVELL lately informed me of a caſe which fell under his notice in the Iſle of Wight, where, from the application of the juice of this Spurge to ſome Warts near the eye of a little girl, the whole face became inflamed to a very great degree.

It is very common in gardens and cultivated ground, flowering in Autumn.



Euphorbia Helioscopia.



Polypodium vulgare

POLYPODIUM VULGARE. COMMON POLYPODY.

POLYPODIUM *Linnæi Gen. Pl.* CRYPTOGAMIA FILICES.

Fructific. in punctis ſubrotundis ſparſis per diſcum frondis.

Raii Syn. HERBÆ CAPILLARES ET AFFINES.

POLYPODIUM *vulgare* frondibus pinnatifidis: pinnis oblongis ſubſerratis obtuſis. *Linn. Syſt. Vegetab. p.* 786. *Fl. Suecic. p.* 373.

POLYPODIUM foliis pinnatis, lanceolatis, radice ſquamata. *Haller hiſt. n.* 1696.

POLYPODIUM *vulgare. Scopoli Fl. Carniol. n.* 1266.

POLYPODIUM *vulgare. Bauhin. Pin.* 359.

POLYPODIUM *vulgare. Parkinſon* 1039.

POLYPODIUM *Gerard emac.* 1138. *Raii Syn. p.* 117, Polypody. *Hudſon Fl. Angl. p.* 387.

RADIX oblique ſub terræ ſperficie reptat, fibras ſuas ex tuberculis quibus plurimis ſcatet demittens, ad craſſitudinem fere minimi digiti accedens, ſquamis fuſcis tecta, colore foris buxea, intus fere herbacea, ſapore dulci, tandem acerbo et adſtringente.

ROOT creeps obliquely under the ſurface of the earth, ſending forth a number of fibres from little tubercles, which are plentifully diſtributed over its ſurface, about the thickneſs of the little finger, ſometimes ſlenderer, covered with brown moſſy ſcales, externally of a pale yellow colour, internally greeniſh, of a taſte at firſt ſweet, but finally ſouriſh and aſtringent.

STIPITES læves, interne ſulcati.

STALKS ſmooth, grooved on the inner ſide.

FRONDES ſemipedales aut pedales, pinnatifidæ, pinnæ oblongæ, ſubſerratæ, obtuſæ, inferne pallidiores.

LEAVES from half a foot to a foot in length, pinnatifid; the pinnæ oblong, ſlightly ſerrated, obtuſe, paliſh underneath.

CAPSULÆ in acervulis, magnis, flavis, rotundis, nervo utrinque ſeriatim locatæ, pedicellatæ, ſubrotundæ, ſuperficie granulata a ſeminibus protuberantibus, annulo elaſtico brevi inſtructæ, in valvulas duas dehiſcentes, *fig.* 2, 3, 4, 5, 6.

CAPSULES placed in a row on each ſide the midrib of the leaf, in large, yellow, round dots, ſtanding on foot-ſtalks, of a roundiſh ſhape, with the ſurface granulated from the ſeeds protuberating, furniſhed with a ſhort elaſtic ſpring, and opening into two valves, *fig.* 2. 3, 4, 5, 6..

SEMINA plurima, ovata, aut ſubreniformia flava, *fig.* 7, 8.

SEEDS numerous, oval or ſomewhat kidney-ſhaped, of a yellow colour, *fig.* 7, 8.

In all thoſe plants of the *Fern Tribe* which I have hitherto had an opportunity of examining, there appears to be much the ſame mechaniſm in their parts of fructification; one of the moſt ſtriking and uſeful of which, is the elaſtic ring which ſurrounds the Capſules, by means of which they are forced open, and the ſeeds diſcharged. So neceſſary a part one ſhould not conceive would be wanting in any of theſe plants, nor will it, I believe, be found to be ſo: yet many Botaniſts, and thoſe too of eminence, not only deny its exiſtence, but make the want of it a character to diſtinguiſh this Genus. GLEDITCH gives us the following as part of the generic character of the *Polypodium* "*Capſulæ annulo deſtitutæ.*" ADANSON alſo gives it the ſame character, "*ſans anneau.*" It will, perhaps, not be difficult to account for this miſtake; and, at the ſame time, it will ſhew us how injurious it is to ſcience, for Authors to take things for granted without examining for themſelves. In TOURNEFORT's elegant figures of the Genera, the Capſules of the *Polypodium* are repreſented without any ring: on the truth of theſe figures, it is highly probable, that thoſe Authors have relied; for, had they made uſe of their own eyes, aſſiſted by a ſmall magnifier, they could not have avoided ſeeing what MALPIGHI long before their time delineated, though rudely, and GLEICHEN ſince more elegantly figured.

There is one circumſtance attending this ſpecies of *Polypodium*, which however does not run through the whole of this Genus, *viz.* the want of an Involucrum or Membrane; the little dots or aſſemblage of Capſules are not covered with any membrane; or if there be a membrane, it is very early deciduous, and not viſible when the Capſules have arrived at a tolerable degree of maturity.

This ſpecies of *Polypody* grows very common in woods and ſhady lanes on the old ſtumps of various trees; it differs much in ſize: ſometimes it occurs on the Oak, in which caſe its virtue, as a medicine, has been more celebrated.

Its effects, when taken inwardly, are ſlightly purgative: it has been recommended in various diſorders of the Viſcera, in the Cachexy, ſwelling of the Spleen, Jaundice, obſtructions of the Meſenteric Glands, Hypochondriac Diſeaſe, Cough, Aſthma, &c. but it has generally been given with ſome other medicines.

In the preſent practice it is but little regarded.

ARABIS THALIANA. PODDED MOUSE-EAR.

ARABIS *Linnæi Gen. Pl.* TETRADYNAMIA SILIQUOSA.

Glandulæ nectariferæ-4, ſingulæ intra calycis foliola, ſquamæ inſtar reflexæ.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

ARABIS *thaliana* foliis radicalibus ovato-lanceolatis, dentatis, punctato-ſcabris.

ARABIS *thaliana* foliis petiolatis lanceolatis integerrimis. *Linn. Syſt. Vegetab. p.* 501. *Fl. Suecic. n.* 605.

ARABIS foliis radicalibus petiolatis, ovatis, dentatis caule ſubnudo ramoſo. *Haller. hiſt. n.* 452.

TURRITIS vulgaris ramoſa. *Raii Syn.* 294, Mouſe-Ear.

BRASSICA ſpuria minima, foliis hirſutis et glabris. *Raii Syn. ed.* 2. 166.

BURSÆ paſtoriæ ſimilis ſiliquoſa major et minor. *Bauhin. Pin.* 108.

PILOSELLA ſiliquoſa. *Thal. tab.* 7.

PARONYCHIA major et altera minor. *Parkinſon* 556. *Hudſon Fl. Angl. p.* 255.

RADIX annua, ſimplex, fibroſa, albida.

ROOT annual, ſimple, fibrous, whitiſh.

FOLIA radicalia oblongo-ovata, petiolata, dentata, preſertim prope baſin, hirſuta, utrinque ſcabra, punctis prominulis, caulina ſeſſilia, dentata, *fig.* 1, 2. hirſuties ad baſin foliorum ſimplex, ad marginem et ſuperficiem bi et trifurcata.

LEAVES of an oblong oval ſhape, ſtanding on foot-ſtalks, indented, eſpecially near the baſe of the leaf, hairy, rough on each ſide, with little prominent points; leaves on the ſtalk ſeſſile and indented, *fig.* 1, 2. the hairs at the baſe of the leaf ſimple, thoſe at the edges and on the ſurface dividing into two or three forks.

CAULIS ſemipedalis ad pedalem, erectus, ſubramoſus, teres, rore glauco tectus, hirſutus, ramuli alterni, nutantes.

STALK from ſix to twelve inches high, upright, ſomewhat branched, round, crooked, covered with a bloom, hairy, the little branches alternate and drooping.

CALYX: PERIANTHIUM tetraphyllum, foliolis ovatis, concavis, hirſutulis, *fig.* 3. auct.

CALYX: a PERIANTHIUM of four leaves, which are oval, concave, and ſlightly hairy, *fig.* 3, mag.

COROLLA: PETALA quatuor, calyce duplo longiora, apice dilata, integra, obtuſa, *fig.* 4. auct.

COROLLA of four PETALS, twice the length of the Calyx, dilated at top, entire and obtuſe, *fig.* 4.

STAMINA: FILAMENTA quatuor, ſubulata, quorum duo breviora, *fig.* 5. ANTHERÆ flavæ, parvæ.

STAMINA: four tapering FILAMENTS, two of which are ſhorter than the others, *fig.* 5. ANTHERÆ ſmall and yellow.

PISTILLUM: GERMEN oblongum, tenue; STYLUS breviſſimus, longitudine Staminum; STIGMA obtuſum, *fig.* 6.

PISTILLUM: GERMEN oblong, ſlender; STYLE very ſhort, equal in height to the Stamina; STIGMA blunt, *fig.* 6.

PERICARPIUM: ſiliqua tenuis, ſemuncialis, bivalvis, *fig.* 7, 8. continens

SEED-VESSEL: a ſmall ſlender pod about half an inch long, of two valves, *fig.* 7, 8, containing

SEMINA plurima, flaveſcentia, *fig.* 9.

SEEDS. Several yellowiſh ſeeds, *fig.* 9.

At firſt ſight, this little plant, in its larger ſtate, forms ſome reſemblance to the *Shepherd's Purſe;* and when ſmall, may be overlooked, or miſtaken for the *Draba Verna,* particularly as it grows in ſimilar ſituations; but by its ſlender pods it may readily be diſtinguiſhed.

We have it frequent enough on our walls, and ſometimes on dry ground, about town; and it may be found in great abundance on the ſouth ſide of *Greenwich-Park Wall,* the top of which, facing the late Sir GREGORY PAGE's, is in particular parts almoſt covered with it; while the bottom of it is, at the ſame time, beautifully ornamented with the *Geranium Cicutarium.*

It flowers in March and April, and the ſeed is ripe in May.

No particular virtues or uſes are aſcribed to it.

Like all other plants (which is a circumſtance that cannot be too often inculcated into the mind of the young Botaniſt) it varies very much in ſize; ſometimes being not more than an inch or two in height, and at other times more than a foot.

The *Glandulæ Nectariferæ,* often found at the baſe of the ſtamina, in the plants of the claſs *Tetradynamia,* and which, according to LINNÆUS, form the character of the genus *Arabis,* are in this ſpecies ſo very minute, as ſcarcely to be diſcerned with a magnifier.



Arabis Thaliana.



Thymus Serpyllum.

THYMUS SERPYLLUM. COMMON WILD THYME.

THYMUS *Linnæi Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Calycis bilabiati faux villis clauſa.

Raii Syn. Gen. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

THYMUS *Serpyllum* floribus capitatis, caulibus repentibus, foliis planis obtuſis, baſi ciliatis. *Linnæi Syſt. Vegetab. p.* 452.

THYMUS foliis ovatis ad baſin ciliatis. *Haller hiſt. n.* 235.

THYMUS *Serpyllum. Scopoli Fl. Carniol. n.* 736.

SERPYLLUM vulgare minus. *Bauhin. Pin.* 220.

SERPYLLUM vulgare. *Gerard emac.* 570.

SERPYLLUM vulgare minus. *Parkinſon* 8. *Raii Syn. p.* 230, Common Mother of Thyme. *Hudſon Fl. Angl. p.* 229.

RADIX lignoſa, fibroſa, fuſca, perennis.

CAULES numeroſi, quadrangulares, duriuſculi, procumbentes, ramoſi, ramis alternis.

FOLIA ovata, petiolata, integerrima, plerumque lævia, glandulis punctata, petiolis ciliatis, *fig.* 1, 2.

FLORES in ſummitatibus caulium verticillatim diſpoſiti, et in capitulis ſubrotundis congeſti.

CALYX: PERIANTHIUM monophyllum, tubulatum, ſtriatum, fauce villis clauſo, *fig.* 9, ſemibifidum in duo labia, labium ſuperius latius, tridentatum, dentibus reflexis; inferius biſetum dentibus ciliatis, *fig.* 3, 4, 5.

COROLLA monopetala; TUBUS longitudine ſetarum calycis, labium ſuperius reflexum, emarginatum, obtuſum, inferius trifidum, longius, laciniis obtuſis medio longiore, *fig.* 6.

STAMINA: FILAMENTA quatuor inæqualia; ANTHERÆ minimæ, *fig.* 7.

PISTILLUM: GERMEN quadripartitum; STYLUS Corolla longior, recurvatus; STIGMA bifidum, acutum, *fig.* 8.

SEMINA quatuor, parva, ſubrotunda, fuſca, *fig.* 10, 11.

ROOT woody, fibrous, of a brown colour, and perennial.

STALKS numerous, ſquare, hard, procumbent, and branched; the branches alternate.

LEAVES oval, ſtanding on foot-ſtalks, entire at the edges, generally ſmooth, dotted with little glands; the foot-ſtalks furniſhed with long hairs, *fig.* 1, 2.

FLOWERS placed in whirls on the tops of the ſtalks, and forming ſmall roundiſh heads.

CALYX: a PERIANTHIUM of one leaf, tubular, ſtriated, the mouth cloſed up with hairs, *fig.* 9, divided into two lips; the uppermoſt having three teeth which bend back; the lowermoſt two, much longer, narrower, and edged with hairs, *fig.* 3, 4, 5.

COROLLA monopetalous: the TUBE the length of the Calyx; the upper lip turningback, notched in and blunt; the lowermoſt longer, divided into three ſegments, the ſegments obtuſe, the middle one longeſt, *fig.* 6.

STAMINA: four FILAMENTS of unequal lengths: ANTHERÆ very minute, *fig.* 7.

PISTILLUM: GERMEN dividing into four parts; STYLE longer than the Corolla, and turning upwards; STIGMA bifid and pointed, *fig.* 8.

SEEDS four, ſmall, roundiſh, of a brown colour, *fig.* 10, 11.

Few plants are ſubject to ſo many varieties as the *Wild Thyme*. In its moſt natural ſtate, when found on dry expoſed downs, it is ſmall and procumbent: when growing among furze or other plants, which afford it ſhelter, it runs up with a ſlender ſtalk to a foot or more in height, and aſſumes an appearance which might puzzle the young Botaniſt. It differs alſo very much in the ſmoothneſs and hairineſs of its leaves: and there is a ſingular variety of it, remarked by LINNÆUS, with woolly heads *(Capitulis tomentoſis)* which are the nidus of ſome inſect. We have ſeen whole banks covered with this turgid variety. The *Veronica Chamædrys, Glechoma Hederacea, Valeriana Locuſta,* and other plants, are frequently diſtorted, and appear under the ſame diſguiſe from a ſimilar cauſe.

On dry chalky downs, the *Wild Thyme* abounds all over England; flowering in July and Auguſt.

It has been a received opinion, that Thyme, and other aromatic herbs, give a flavour to the fleſh of ſheep that feed where theſe plants are found: but curious obſervers have remarked, that ſheep neither eat Thyme, nor any other aromatic herb, when they have a free choice of paſturage*.

The Ancients planted Thyme for the ſake of their bees, who collect honey very largely from it; which at that period was of more value than at preſent: the cultivation of ſugar in the Weſt-India Iſlands, has contributed much to reduce its conſequence in domeſtic œconomy.

THEOPHRASTUS relates, that *Thyme* produced no ſeed that could be diſcovered; but that the plant might be increaſed by ſowing its flowers. PLINY copies this paſſage from THEOPHRASTUS; and, inſtead of doubting the fact, remarks, "*quid non tentavere homines?*" What experiments have not mankind tried? The credulity of the Ancients is very wonderful! Whatever one Author advanced, the next took for granted, to the great detriment of natural hiſtory.—Inveſtigation was never thought of!

Dr. ARMSTRONG, in his elegant and claſſical poem on health, recommends the ſoil where this plant *(Thyme* or *Marjoram)* abounds, as particularly healthful, and proper for habitations.

——— "*Mark where the dry champaign*
"*Swells into cheerful hills; where Marjoram*
"*And Thyme, the love of bees, perfume the air.*
"*There bid thy roofs, high on the baſking ſteep*
"*Aſcend: there light thy hoſpitable fires.*"

* See Account of Sheep-Walks in Spain, Gent. Mag. 1764.

ANEMONE NEMOROSA. WOOD ANEMONY.

ANEMONE *Linnæi Gen. Pl.* POLYANDRIA POLYGYNIA.

Cal. o. *Petala* 6-9. *Sem.* plura.

Raii Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

ANEMONE *nemoroſa* ſeminibus acutis, foliolis inciſis, caule unifloro. *Linnæi Syſt. Vegetab. p.* 425. *Flora Suecic. p.* 190.

ANEMONE ſeminibus nudis, caule unifloro, foliis radicalibus nullis, caulinis quinque-partitis, lobis tripartitis inciſis. *Haller. hiſt. Helv.* 2. *p.* 64.

ANEMONE *nemoroſa. Scopoli Fl. Carniol. p.* 383. *n.* 660.

ANEMONE ſylveſtris alba major. *Bauhin Pin.* 176.

ANEMONE nemorum alba. *Gerard emac.* 383.

RANUNCULUS nemoroſus albus ſimplex. *Parkinſon* 325. *Raii Syn.* 259, Wood Anemony. *Hudſon Fl. Angl.* 208. *Oeder Fl. Dan. tab.* 549.

RADIX teres, per terram oblique repens, craſſitie pennæ coracis, externe caſtanea, intus alba, fragilis, fibrillis fuſcis prædita.

ROOT round, creeping obliquely under the ſurface of the earth, the thickneſs of a crow quill, externally cheſnut-coloured, internally white, brittle, furniſhed with brown fibres.

CAULIS teres, ſimplex, triuncialis circiter, purpuraſcens, pilis mollibus veſtitus, trifoliatus.

STALK round, ſimple, about three inches high, purpliſh, covered with ſoft hairs, and bearing three leaves.

FOLIA terna, ſubtus hirſuta, tripartita, lobis inciſis, lateralibus fere uſque ad baſin diviſis.

LEAVES growing three together ſlightly hairy underneath, formed of three ſegments; the ſide lobes divided nearly down to the baſe.

PETIOLI breves, vaginantes.

FOOT-STALKS of the leaves ſhort, and forming a kind of ſheath.

SCAPUS uniflorus, nutans.

FLOWER-STALK ſupporting one flower, and drooping at top.

CALYX nullus.

CALYX wanting.

COROLLA: PETALA ſex aut ſeptem, oblongo-ovata, alba, ſubtus incarnata, patentia, ſubemarginata, *fig.* 1.

COROLLA: ſix or ſeven PETALS, of an oblong oval ſhape, white, underneath purpliſh, ſpreading, ſlightly notched in at top, *fig.* 1.

STAMINA: FILAMENTA numeroſa, inæqualia, capillaria, filiformia, alba: ANTHERÆ flavæ ſubrotundæ, biloculares, compreſſæ: POLLEN album, *fig.* 2, 3.

STAMINA: FILAMENTS numerous, unequal, very ſmall, thread-ſhaped and white: ANTHERÆ yellow, roundiſh, of two cavities, flattiſh, POLLEN white, *fig.* 2, 3.

PISTILLUM: GERMINA in capitulum collecta, ovata, villoſa: STYLI ſubulati, incurvati: STIGMA ſimplex, *fig.* 4, 5.

PISTILLUM: GERMINA collected into a little head, oval, villous: STYLES tapering and bending downwards: STIGMA ſimple, *fig.* 4, 5.

SEMINA plurima, nuda, oblonga, hirſuta, mucrone incurvo, *fig.* 6, 7, auct.

SEEDS ſeveral, naked, oblong, hairy, the top bending downwards, *fig.* 6, 7, magnified.

From the obſervations of ſeveral authors, the *Wood Anemony* may be conſidered as a poiſonous plant. According to LINNÆUS, cattle which have been brought from open to woody paſtures, and have eaten of this plant, have been affected with the bloody flux, and have made bloody urine. HALLER informs us, that in *Kamtſchatka*, the inhabitants are ſaid to poiſon their arrows with a ſpecies of *Anemony*, the wounds from which produce certain death.

The *Wood Anemony* produces its flowers early in the Spring. In moſt of our woods the ground is nearly covered with them, in the months of April and May. In fine clear weather the bloſſoms are expanded, and become ſo erect as to face the ſun; but in the evening, and in wet weather, they are cloſed and hang down, whereby the delicate parts of the flower are ſecured from injury.

The chief variation obſerved in it, is the colour of its Petals, which are ſometimes quite white: and, according to MERRET, they occur in *Devonſhire* wholly red: both ſorts, particularly when double, are cultivated by the gardeners: and were the ſame pains to be taken with it, as with ſome of our foreign *Anemonies*, it might probably be very much improved in the eye of the Floriſt.

The leaves of divers plants, particularly the *Euphorbia Helioſcopia*, are ſubject to be covered with ſmall yellow dots, the effects of ſome inſect: this alſo ſometimes happens to the *Wood Anemony*. In C. BAUHINE, we find it mentioned under the name of *Anemone nemoroſa ſterilis foliis punctatis*. This variety is ſomewhat unfortunately figured in DILLENIUS's edition of RAY's *Synopſis*, and deſcribed as a Fern, to which it certainly has no pretenſions, as is evident from the irregularity of its dots.



Anemone nemorosa.



Ranunculus Ficaria

RANUNCULUS *FICARIA*. PILEWORT.

RANUNCULUS *Linnæi Gen. Pl.* POLYANDRIA POLYGYNIA.

Cal. 5-phyllus. *Cor.* 5-petala. *Sem.* plurim. *Petala* ungue nectarifero.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

RANUNCULUS *Ficaria* foliis cordatis angulatis petiolatis. *Linnæi Syſt. Vegetab. p.* 428. *Fl. Suecic. p.* 193.

FICARIA *Haller hiſt. Helv. n.* 1160. *Hudſon Fl. Angl. p.* 213.

RANUNCULUS *Ficaria. Scopoli Fl. Carniol. p.* 395.

CHELIDONIA rotundifolia minor. *Bauhin Pin.* 309.

CHELIDONIUM minus. *Gerad emac.* 816. *Parkinſon* 617. *Raii Syn.* 246, Pilewort, or the Leſſer Celandine. *Oeder Fl. Dan. icon.* 469.

RADIX tuberoſa, tuberibus numeroſis, congeſtis, pallidis, ſubpyriformibus, modo brevibus, modo longe protenſis; e ſummo tuberum oriuntur fibrillæ plurimæ.

CAULES plures, palmares et ultra, teneri, glabri, ad baſin rubri, ramoſi, decumbentes, nonnunquam etiam repentes, bulbillis in axillis foliorum radicantibus.

FOLIA *radicalia* ſubrotundo-cordata, variantia, longe petiolata, maculis albis interdum notata, glabra, venis ſuperne impreſſis, ſubcrenata, *caulina* ſubtriangularia, anguloſa.

PEDUNCULI uniflori, ſulcati, peractâ floreſcentiâ recurvati.

CALYX: PERIANTHIUM triphyllum, foliolis concavis, deciduis, baſi ſua caulem amplectentibus, *fig.* 1.

COROLLA: PETALA plerumque octo, quoad formam valde variantia, plerumque vero ovato-lanceolata, lutea, nitida, *fig.* 2, 3.

STAMINA: FILAMENTA numeroſa; ANTHERÆ flavæ, oblongæ, compreſſæ, *fig.* 6, 7.

PISTILLUM: GERMINA numeroſa, in capitulum collecta; STIGMATA parva, *fig.* 8.

SEMINA plurima, ſubovata, ſæpius abortiva, *fig.* 9.

NECTARIUM ſquamula ad baſin petalorum, *fig.* 4, 5.

ROOT tuberous, the knobs or bulbs numerous, crouded, of a pale colour, ſomewhat pear-ſhaped, ſometimes ſhort, ſometimes extended to a conſiderable length; from the top of them ariſe many ſmall fibrous roots.

STALKS numerous, four inches or more in length, tender, ſmooth, red at bottom, branched, decumbent, ſometimes even creeping, from little bulbs in the boſoms of the leaves taking root.

LEAVES *next the root* of a roundiſh heart-ſhaped figure, variable, ſtanding on long foot-ſtalks, ſometimes ſpotted with white, ſmooth and ſhining: the veins on the upper ſide of the leaf preſſed in, differently notched in different leaves; thoſe of the ſtalk triangular with an angular margin.

FOOT-STALKS of the flower, ſuſtaining one flower on each, grooved, when the bloſſom is fallen bending backwards.

CALYX: a PERIANTHIUM of three leaves, which are hollow and deciduous, and embrace the top of the ſtalk, *fig.* 1.

COROLLA: generally eight PETALS, which vary exceedingly in their form, moſt commonly of an oval-pointed ſhape, yellow and ſhining, *fig.* 2, 3.

STAMINA: FILAMENTS numerous; ANTHERÆ yellow, oblong and flat, *fig.* 6, 7.

PISTILLUM: GERMINA numerous, forming a little head; STIGMATA very ſmall, *fig.* 8.

SEEDS numerous, ſomewhat oval, moſt commonly abortive, *fig.* 9.

NECTARY a little ſcale at the baſe of the petals, *fig.* 4, 5.

Botaniſts ſeem very much divided in their opinions reſpecting the genus of this plant, ſome making it a *Ranunculus*, others a genus diſtinct from it. Thoſe who object to its being a *Ranunculus*, urge its not having the characters of that genus; that the Calyx, inſtead of having five leaves, has only three, while the Petals are more numerous than in the *Crowfoots*: this is granted: but is a deficiency in, or an addition to, any of the parts of the fructification, a ſufficient reaſon for founding a new genus? I ſhould apprehend not; for ſuch inſtances we meet with in plants almoſt every day: habit and peculiar characteriſtics are more to be attended to: and, in this caſe, its gloſſy petals, with its ſquamula or ſcale at the baſe of each, its grooved peduncles, joined to its general appearance, ſeem fully to juſtify the great reformer of Botany in making it a *Ranunculus*.

Although the Calyx in general has only three leaves, it ſometimes occurs with four and five.

As the *Pilewort* blows earlier than any of our other *Crowfoots*, it is liable to have its parts of fructification injured by the inclemency of the weather, to ſecure it from which, it has a power of cloſing its petals in a much greater degree than the others, and in this ſtate we uſually find it in the mornings and evenings, and in wet weather; and may not Nature, to produce this effect, deviate from the uſual ſtructure of the flowers of this genus? Is not the Calyx, by being in three leaves, ſtronger than if it had been in five? And will not the Petals, by being more numerous, make leſs reſiſtance to the cloſing power of the Calyx.

In its firſt appearance in the Spring, this plant is ſmall and extends but little; but in the month of May, particularly by the ſides of moiſt ditches, it grows much more luxuriantly; and in this ſtate, ſmall bulbs, like grains of wheat, are obſervable in the boſoms of the leaves, which, as the ſtalks lie on the ground, get into the earth, and become the tuberous roots of young plants: this proviſion of nature for its increaſe, ſeems the more neceſſary, as it is but ſeldom that its ſeeds come to perfection. Now and then a head with perfect ſeeds is obſervable, and when the plant ſtands ſingly, the ſtalk ſupporting them, bends towards the ground, ſo that the ſeeds may inſinuate themſelves. Thus Nature appears to have been abundantly careful in its preſervation.

The roots, like thoſe of the *Orchis* and other bulbous plants, are renewed every year.

In ſome meadows, paſtures, and orchards, it very much abounds, to the excluſion of more uſeful plants: as cattle do not appear to eat it, it would be good huſbandry to dig it up, and ſow the ground with ſuch plants as are more beneficial.

The particular form of its roots ſeems firſt to have introduced it as a medicine for the Piles, in which diſorder, like many other remedies more rationally recommended, it may palliate, but will ſcarcely effect a cure.

It is cultivated in gardens with a double flower.

ERICA CINEREA. FINE-LEAVED HEATH.

ERICA *Linnæi Gen. Pl.* OCTANDRIA MONOGYNIA.

Cal. 4-phyllus. *Cor.* 4-fida. *Filamenta* receptaculo inſerta. *Antheræ* bifidæ. *Caps.* 4-locularis.

Raii Syn. ARBORES ET FRUTICES.

ERICA *cinerea* foliis ternis glabris linearibus.

ERICA *cinerea* antheris criſtatis, corollis ovatis, ſtylo ſubexerto, foliis ternis, ſtigmate capitato. *Linnæi Syſt. Vegetab. p.* 303.

ERICA humilis, cortice cinereo Arbuti flore. *Bauhin. p.* 486.

ERICA virgata ſive *VI.* Cluſii. *Parkinſon* 1483.

ERICA tenuifolia *Gerard emac.* 1380. *Raii Syn. p.* 471, Fine-Leaved Heath. *Hudſon Fl. Angl. p.* 144. *Oeder Dan. icon.* 38.

RADIX perennis, lignoſa.

CAULES ſuffruticoſi, pedales, lignoſi, cortice cinereo, ramoſi, ramis oppoſitis.

FOLIA terna, linearia, patentia, ſupra glabra, nitida, tranſverſim rugoſa, infra canaliculata, ſaturate viridia, *fig.* 1, 2.

FLORES ſaturate purpurei, tactu ſonori, ſpicati, ſpicis longis, verticillato-glomeratis, terminalibus.

CALYX PERIANTHIUM tetraphyllum, foliolis lanceolatis, acuminatis, margine membranaceis, coloratis, perſiſtentibus, foliolis duobus acutis et multo minoribus ad baſin, *fig.* 3, 5.

COROLLA monopetala, ovata, ore quadrifido, laciniis obtuſis, ſæpe emortuis, perſiſtens, *fig.* 4.

STAMINA: FILAMENTA octo, ſubulata, alba, Corollâ breviora, receptaculo inſerta; ANTHERÆ ſubſagittatæ, cohærentes, biloculares, bicornes, cornubus laciniatis, ad baſin rubris, biforaminoſæ, *fig.* 6, 7.

PISTILLUM: GERMEN cylindraceum, ſulcatum; STYLUS ſubulatus, purpureus, Corollâ incluſus, Staminibus longior; STIGMA ſubrotundum, *fig.* 8, 9, 10.

PERICARPIUM CAPSULA ſubrotunda, quadrilocularis, quadrivalvis.

SEMINA plura, ſubovata, ſuperficie reticulata, Tetralicis quadruplo majora.

ROOT perennial and woody.

STALKS ſhrubby, about a foot high, woody; the bark of an aſh colour, branched; the branches oppoſite.

LEAVES growing three together, linear, ſpreading, above ſmooth and ſhining, tranſverſely wrinkled; below hollow, of a deep-green colour, *fig.* 1, 2.

FLOWERS of a deep-purple colour, ſonorous when touched, growing in long, cluſtered, and whirled ſpikes, which are terminal.

CALYX: a PERIANTHIUM of four leaves, of a pointed oval ſhape, membranous at the edge, coloured, continuing, with two pointed and much ſmaller leaves at the bottom of them, *fig.* 3, 5.

COROLLA of one Petal, oval, the mouth divided into four ſegments, which often occur withered, continuing, *fig.* 4.

STAMINA: eight FILAMENTS, tapering, white, ſhorter than the Corolla, inſerted into the Receptacle: ANTHERÆ ſomewhat arrow-ſhaped, adhering together, with two cavities open at top, and two little horns, which are jagged and red at bottom, *fig.* 6, 7.

PISTILLUM: GERMEN cylindrical, grooved; STYLE tapering, purple, encloſed within the Corolla, but longer than the Stamina: STIGMA roundiſh, *fig.* 8, 9, 10.

SEED-VESSEL a roundiſh Capſule of four cavities and four valves.

SEEDS ſeveral, of an oval ſhape, the ſurface reticulated, four times larger than thoſe of the Croſs-Leaved Heath.

This ſpecies of *Heath*, which produceth the moſt ſhewy flowers, grows generally with the *Croſs-Leaved* and *Common Heath*; and flowers in July and Auguſt.

As it grows to a pretty conſiderable height, it is applicable to the ſame uſes as the *Common Heath*.

It is diſtinguiſhed from the *Croſs-Leaved Heath*, by the fineneſs, ſmoothneſs, and deep-green colour of its leaves: its flowers alſo grow more in ſpikes, and are of a deeper purple colour.



Erica cinerea.

Tussilago farfara.



TUSSILAGO FARFARA. COLTSFOOT.

TUSSILAGO *Linnæi Gen. Pl.* SYNGENESIA POLYGAMIA SUPERFLUA.

Recept. nudum. *Pappus* ſimplex. *Cal.* ſquamæ æquales, diſcum æquantes, ſubmembranaceæ.

Raii Syn. Gen. 17. HERBÆ FLORE COMPOSITO, SEMINE PAPPOSO NON LACTESCENTES, FLORE DISCOIDE.

TUSSILAGO *Farfara* ſcapo unifloro imbricato, foliis ſubcordatis angulatis denticulatis. *Linnæi Syſt. Vegetab. p.* 629. *Spec. Plant. p.* 1214. *Fl. Suecic. n.* 743.

PETASITES ſcapo unifloro; floſculis in ambitu lingulatis. *Haller. hiſt. n.* 143.

TUSSILAGO *Farfara. Scopoli Fl. Carniol. n.* 1059.

TUSSILAGO vulgaris. *Bauhin. pin.* 197.

TUSSILAGO *Gerard emac.* 811.

TUSSILAGO *Parkinſon* 1220. *Raii Syn. p.* 173, Common Coltsfoot. *Hudſon Fl. Angl. p.* 315. *Oeder Fl. Dan. icon.* 595.

RADIX prælonga, craſſitie minimi digiti, albida, ſub terra reptans et late ſe propagans, ex una parte folia ex altera flores emittens.

FOLIA ſubrotundo-cordata, anguloſo-dentata, inferne tomentoſa, albida, ſuperne viridia, ſæpe cum tantillo tomenti.

SCAPI uniflori, ſtriati, tomentoſi, folioſi, foliolis lanceolatis, adpreſſis, rubicundis, peractâ floreſcentiâ nutantes, demum erecti.

CALYX (communis) cylindraceus; ſquamis oblongis, acutis, alternis anguſtioribus, *fig.* 1, 2.

COROLLA compoſita: COROLLULÆ in *diſco* hermaphroditæ, tubuloſæ, flavæ; limbo quinquefido, acuto, reflexo, *fig.* 4. ANTHERÆ in tubum coalitæ, apicibus acutis, *fig.* 5. GERMEN breve, *fig.* 8. STYLUS filiformis, Antheris longior, *fig.* 9. STIGMA capitatum, *fig.* 10.

COROLLULÆ in *radio* femineæ, flavæ, baſi tubuloſæ, limbus linearis, *fig.* 3. GERMEN oblongum, *fig.* 6. STIGMA bifidum, tenue, *fig.* 7.

SEMEN oblongum, pallide fuſcum; PAPPUS ſeſſilis, ſimplex, *fig.* 11.

ROOT very long, the thickneſs of ones little finger, whitiſh, creeping under the ground, and propagating itſelf far and wide; from one part of it ſending forth leaves, from another part flowers.

LEAVES of a roundiſh heart-ſhaped figure, angular and indented, underneath downy and whitiſh; above green, oftentimes covered with a little down.

STALKS ſupporting one flower, channeled, downy, covered with leaves, which are lanceolate, preſſed to the ſtalk, and reddiſh, upright, when the bloſſoms are over hanging down, finally becoming upright.

CALYX (common to all the florets) cylindrical; the ſquamæ or little leaves oblong, pointed; the alternate ones narroweſt.

COROLLA compound: the FLORETS in the *centre* hermaphrodite, tubular, yellow; the limb divided into five ſegments, which are pointed and turn back, *fig.* 4. ANTHERÆ uniting into a tube, the tips pointed, *fig.* 5. the GERMEN ſhort, *fig.* 8. the STYLE filiform, longer than the Antheræ, *fig.* 9. the STIGMA forming a little head, *fig.* 10.

FLORETS in the *circumference* yellow, at bottom tubular, the limb very narrow, *fig.* 3. GERMEN oblong, *fig.* 6. STIGMA bifid, ſlender, *fig.* 7.

SEED oblong, of a pale brown colour; DOWN ſtanding on the ſeed, not feathered, *fig.* 11.

Next to the *Hazel*, the *Coltsfoot* is the firſt flower which appears with us in the Spring; and there is this remarkable circumſtance attending it, that its bloſſoms come up generally at ſome diſtance from, and before its leaves: theſe are gathered by many perſons, who make a ſyrup or tea of them when dried, which is generally conſidered as a pectoral, or uſeful in diſorders of the lungs. The leaves make a principal ingredient in the Britiſh herb tobacco.

As ſoon as the flowers are out of bloom, and the ſeeds, with their pappus or down, as yet moiſt, are encloſed within the Calyx, the heads hang down as repreſented in the figure: as the moiſture of the ſeeds and pappus evaporates in ripening, they become lighter, and are again erected; and now the pappus fully expands, and puts on ſomewhat the appearance of the Dandelion puff. I have noticed this peculiarity, as the like does not take place in the generality of compound flowers.

In *Charlton Sand-Pits*, and many other places about Town, the *Coltsfoot* is plentiful enough; flowering in February and March.

Farmers are diſpleaſed with the appearance of this plant on their ground, as it not only indicates a poor, cold, and impoveriſhed ſoil; but is with much difficulty, from the length of its creeping roots, effectually deſtroyed.

The

The cuſtom of ſmoking this plant, which ſtill prevails, is of ancient date: PLINY directs the dried leaves and root of *Coltsfoot* to be burned, and the ſmoke drawn into the mouth through a reed and ſwallowed, as a remedy for an obſtinate cough; the patient ſipping ſome raiſin wine with each draught of the ſmoke: "*Hujus* "*aridæ cum radice fumus, per Arundinem hauſtus et devoratus, veterem ſanare dicitur tuſſim; ſed in ſingulos* "*hauſtus paſſum guſtandum eſt.*" This is the only account amongſt the ancients, that we have hitherto been able to diſcover, which tends towards the practice of ſmoking: but we cannot acquieſce in the common opinion, that ſmoking of tobacco, or at leaſt ſome kind of plant, was unknown in the old world, till Sir WALTER RALEIGH brought it from *America*. Is it probable that the inhabitants of *Africa* ſhould ſo ſoon have univerſally adopted a cuſtom from *Europe* that was unknown two centuries ago? Or that the *Aſiatics*, ſo tenacious of their own manners, cuſtoms, and habits, ſhould in ſo ſmall a time, have agreed to extend this uncouth kind of luxury over a vaſt continent, from the confines of *Conſtantinople* to the extremities of *China?*

Countries thinly inhabited are much moleſted with gnats. Travellers tell us, that the *Northern Aſiatic Tartars* conſtantly carry on their arms, during the Summer, a pot of burning touchwood, ſometimes prepared from the root of this plant, to defend themſelves by the ſmoke, from the annoyance of theſe inſects. It is probable one more ingenious than the reſt contrived to keep this fire alive, by a communication with his breath; and this expedient by degrees produced a tobacco-pipe. A propenſity to intoxication, ſo natural to mankind, would give a preference to tobacco before moſt other vegetable ſubſtances; and thus a cuſtom, that in the beginning was taken up for ſelf-defence, at laſt might become a luxury.

The firſt diſcoverers of *America* probably found the natives ſmoking tobacco: but might they not bring this practice with them from the northern parts of *Europe* or *Aſia*, which were never penetrated by the *Roman* arms; from whence it appears probable that *America* was peopled?

A room or bed-chamber may at any time be cleared from gnats, by ſetting the windows open, and ſmoking or burning ſome tobacco, from which the inſects are obliged immediately to eſcape. Thoſe that are offended by its ſmell, may ſubſtitute this plant in its ſtead. But cultivated and inhabited countries are in a great meaſure defended from inſupportable ſwarms of gnats, by a proviſion of nature little attended to. Of the four kinds of ſwallows which frequent this iſland, whoſe food conſiſts entirely of flying inſects, three of them are domeſtic, and could with difficulty find ſuitable conveniencies for building their neſts, without attaching themſelves to the habitations of men, around which they are perpetually hawking for their prey: hence it is apparent why deſerts particularly abound with gnats.

The poet obſerves, that the martin or martlet, one ſpecies of ſwallow, chooſes a delicate air for its reſidence. Who then can ſuffer its neſt to be diſturbed after reading the following lines? eſpecially ſince this bird pays ſuch a compliment to the ſweetneſs of the ſituation.

———" *This gueſt of ſummer,*
" *The temple-haunting martlet, does approve,*
" *By his lov'd maſonry, that heavens breath*
" *Smells wooingly here: no jutting frieze,*
" *Buttreſs, nor coigne of vantage, but this bird*
" *Hath made his pendent bed and procreant cradle.*
" *Where they moſt breed and haunt, I have obſerv'd*
" *The air is delicate.*"

Although we have wandered from our ſubject, the candid and humane will forgive our interceding for a viſitor, who claiming the rites of hoſpitality, places unreſerved confidence in us, and ſeems directed by Providence to attend on mankind, for purpoſes the moſt friendly and beneficial.

CERASTIUM VISCOSUM. BROAD-LEAVED MOUSE-EAR CHICKWEED.

CERASTIUM *Linnæi Gen. Pl.* DECANDRIA PENTAGYNIA.

Cal. 5-phyllus. *Petala* bifida. *Capſ.* unilocularis apice dehiſcens.

Rai Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

CERASTIUM *viſcoſum* erectum villoſo-viſcoſum. *Linnæi Syſt. Vegetab. p.* 362. *Fl. Suecic. n.* 414.

MYOSOTIS hirſuta et viſcoſa. *Haller hiſt. n.* 895.

MYOSOTIS hirſuta altera viſcoſa. *Vaill. Paris.* 142. *t.* 30. *fig.* 1.

ALSINE hirſuta altera viſcoſa. *C. Bauhin. Pin.* 251.

ALSINE viſcoſa. *Parkinſon.* 768.

ALSINE hirſuta Myoſotis latifolia præcocior. *Cat. Angl.*

ALSINE Myoſotis humilior et rotundo folio. *Merret. Pin.* The Broader-leaved Mouſe-ear Chickweed.

Raii Syn. p. 348. *Hudſon Fl. Angl. p.* 175.

RADIX annua.

CAULIS palmaris ad pedalem, baſi ramoſus, medius caulis erectus, laterales adſcendentes, dichotomus, pilis glanduliferis veſtitus, unde ſub viſcoſus evadit.

FOLIA ovata, ſubconnata, villoſo-viſcoſa, ad inferiorem partem caulis baſi anguſtiora, e flavo vireſcentia.

FLORES in ſummitatibus caulium, plantâ adhuc infantili arcte ſtipantur, ad quindecim aut plures.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovato-acuminatis, longitudine petalorum, apice purpuraſcentibus, viſcoſo-piloſis, *fig.* 1.

COROLLA: PETALA quinque, alba, oblonga, anguſta, baſi villoſa, apice bifida, *fig.* 2.

STAMINA: FILAMENTA decem, ſubulata, quorum quinque longiora, baſi glandulâ inſtructa, *fig.* 3, 6.

PISTILLUM: GERMEN ovatum: STYLI quinque villoſi, germine breviores: STIGMATA obtuſiuſcula, *fig.* 4, 5.

PERICARPIUM: CAPSULA corniformis, ore decemdentato, calyce dimidio longiore, *fig.* 7.

SEMINA plurima, flaveſcentia, ſuborbiculata, crenulata, *fig.* 8, 9.

ROOT annual.

STALK from three inches to a foot in height, branched at bottom, the middle ſtalk upright, the ſide ones bending upward, forked at top, covered with numerous hairs, each of which is terminated by a gland, whence it becomes ſlightly viſcid.

LEAVES oval, ſlightly connate, hoary with a little clammineſs, at the bottom of the ſtalk narrower at the baſe, of a yellowiſh green colour.

FLOWERS, while the plant is young, are cloſely crowded together on the tops of the ſtalks to the number of fifteen or more.

CALYX: a PERIANTHIUM of five leaves, which are of an oval pointed ſhape, the length of the petals, purpliſh at top, and covered with viſcid hairs, *fig.* 1.

COROLLA: five white PETALS, oblong, narrow, at bottom villous, bifid at top, *fig.* 2.

STAMINA: ten FILAMENTS, tapering, of which five are longer than the others, and furniſhed at bottom with a ſmall gland, *fig.* 3, 6.

PISTILLUM: GERMEN oval: STYLES five, villous, ſhorter than the germen: STIGMATA bluntiſh, *fig.* 4, 5.

SEED-VESSEL a CAPSULE, horn-ſhaped, twice the length of the calyx, the mouth furniſhed with ten teeth, *fig.* 7.

SEEDS ſeveral, yellowiſh, roundiſh, and notched, *fig.* 8, 9.

Among the plants which are with difficulty diſtinguiſhed by the young Botaniſt, we may properly reckon three of our common *Ceraſtiums*, viz. the *viſcoſum*, *vulgatum*, and *ſemidecandrum*, as all of them have ſome ſimilarity in their appearance, occur frequently in the ſame ſituations, and are ſubject to be much altered in their appearance, according to the ſoil and ſituation in which they grow.

The figure which is here given of the *viſcoſum*, repreſents that plant in its medium ſtate; on walls it is found much ſmaller; in meadows it is found much larger; and in both theſe ſituations, as well as on dry banks and ant hills, it occurs very plentifully, and flowers in the months of April and May, being one of the earlieſt in bloom.

It is diſtinguiſhed from the others by the upright manner of its growing, by its broad hoary leaves, the narrowneſs of its petals, and the crowded or cluſtered appearance of its flowers before they blow: its leaves alſo in general are of a paler colour than the reſt.

It is not remarked for any particular uſe; neither is it noxious to the Farmer or Gardener.

LINNÆUS obſerves that the plant is liable to be much diſfigured by a ſpecies of *Chermes*.



Cerastium viscosum



Mercurialis perennis

MERCURIALIS PERENNIS. DOGS MERCURY.

MERCURIALIS *Linnæi Gen. Pl.* DIOECIA ENNEANDRIA.

MASC. *Cal.* 3-partitus. *Cor.* 0. *Stam.* 9-s. 12. *Antheræ* globoſæ, didymæ.

FEM. *Cal.* 3-partitus. *Cor.* 0. *Styli* 2. *Capſ.* dicocca, 2-locularis. 1-ſperma.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALA POTIUS.

MERCURIALIS *perennis* caule ſimpliciſſimo foliis ſcabris. *Linnæi Syſt. Vegetab. Sp. Pl.* 1465.

MERCURIALIS caule perenni ſimplici, foliis ovato-lanceolatis hirſutis. *Haller hiſt. helv. n.* 1601.

MERCURIALIS *Cynocrambe. Scopoli Fl. Carniol. p.* 266. *n.* 1225.

MERCURIALIS *perennis* repens Cynocrambe dicta, *Raii Syn. p.* 139. *Hudſon Fl. Angl. p.* 371.

MERCURIALIS montana teſticulata et Mercurialis montana ſpicata. *Bauhin. Pin.* 123.

MERCURIALIS ſylveſtris Cynocrambe dicta vulgaris mas et femina. *Parkinſon* 295.

CYNOCRAMBE mas et femina. *Gerard emac.* 333. *Oeder. Fl. Dan.* 400.

RADIX perennis, repens, alba, fibroſiſſima.
CAULIS erectus, ſimplex, pedalis, folioſus, inferne nudus, teres, alterne anceps.
FOLIA oppoſita, ovato-acuta, petiolata, hirſutie ſcabriuſcula, ſerrata, ſerraturis obtuſiuſculis glandulâ albâ ad lentem conſpicua terminatis.

STIPULÆ duæ, parvæ, acutæ, caulis utrinque ad baſin petioli.
PEDUNCULI verſus ſummitatem caulis prodeunt, oppoſiti, axillares, hirſuti, in maribus caulem ſuperant in femineis intra folia reconduntur.

FLORES feminei pauci, maſculi plures, ſeſſiles, glomeratim et verticillatim quaſi caulem ſemiamplectuntur.

FEMINA.

CALYX: PERIANTHIUM tripartitum, laciniis ovato-lanceolatis, ſuberectis, *fig.* 1, 2.

COROLLA nulla.
NECTARIA acumina duo ſubulata ad ſingulum latus germinis ſingula.
PISTILLUM: GERMEN ſubrotundum, compreſſum: STYLI ſeu potius STIGMATA dua, acuta, reflexa, *fig.* 4.
PERICARPIUM: CAPSULA ſubrotunda, didyma, bilocularis, *fig.* 5, 6.
SEMEN ſolitarium, ſubrotundum, purpureo-fuſcum, *fig.* 7.

MAS.

CALYX: PERIANTHIUM ut in femina.
STAMINA: FILAMENTA novem plerumque, capillaria, recta, longitudine calycis: ANTHERÆ globoſæ, didymæ, primo flavæ, mox cæruleſcentes, *fig.* 3.

ROOT perennial, creeping, white, and very fibrous.
STALK upright, ſimple, a foot high, leafy, naked below, round, ſlightly winged alternately.
LEAVES oppoſite, oval, pointed, ſtanding on foot-ſtalks ſlightly hairy and rough to the touch, ſerrated; the teeth bluntiſh, and terminated by a whitiſh gland, viſible only by a magnifier.
STIPULÆ two, ſmall, pointed, on each ſide the ſtalk at the baſe of the foot-ſtalk.
FOOT-STALKS of the flowers proceed from the boſoms of the leaves near the top of the ſtalk, are oppoſite and hairy; in the male plant they are longer than the ſtalk; in the female they are hid among the leaves.
FLOWERS in the female few; in the male numerous, ſeſſile, growing ſomewhat whirl-like in little cluſters, and half ſurrounding the ſtalk.

FEMALE.

CALYX: a PERIANTHIUM divided into three ſegments, which are oval, pointed, and ſomewhat erect, *fig.* 1, 2.
COROLLA wanting.
NECTARY two ſmall pointed filaments, one on each ſide the germen.
PISTILLUM: GERMEN roundiſh and ſomewhat flattened: STYLES or rather STIGMATA, two, pointed and turning back, *fig.* 4.
SEED-VESSEL: a roundiſh double CAPSULE of two cavities, *fig.* 5, 6.
SEED: one in each cavity, roundiſh, of a browniſh purple colour, *fig.* 7.

MALE.

CALYX: a PERIANTHIUM the ſame as the female.
STAMINA: nine FILAMENTS, for the moſt part, capillary, ſtraight, the length of the calyx: ANTHERÆ round, double, firſt yellow, afterwards becoming bluiſh.

In the third edition of RAY's *Synopſis*, SIR HANS SLOANE communicates a very particular account of the pernicious effects of this plant. It was, as it appears from thence, gathered by the miſtreſs of a family, in the fields (*in agris* are the words) fried with bacon, and eaten for ſupper by the wife, the huſband, and the three children; the children in about two hours awaked out of their ſleep violently ſick; on being removed to the fire they both vomited, and purged, and in about half an hour afterwards they again fell aſleep: two of them continued in this ſtate of ſtupor for twenty-four hours, when they awaked, and after more copious evacuations recovered. The third child awaked not till the third day, and then juſt opening its eyes, was ſeized and carried off by convulſions. The man being of a robuſt conſtitution was not ſo violently affected; but after a longer ſleep than uſual, went about his buſineſs, feeling no other inconvenience than a burning heat in his chin, to aſſuage which he was obliged for the whole day to apply cold water. The woman, after being more than uſually oppreſſed with ſleep, found herſelf ill, and did not recover for ſeveral days.

From

From ſo circumſtantial an account, it would appear that there was little doubt of the noxious quality of this plant to the human ſpecies; yet it is remarkable, that this ſhould be the only inſtance of ſuch effects mentioned by authors, when the plant has by many been recommended as a pot-herb: ſuch violent effects do not appear to have been known to the ancients, by ſome of whom is is recommended as a laxative medicine.

It appears to be well worth aſcertaining whether it really poſſeſſes thoſe poiſonous qualities; whether it be noxious early in the ſpring, or later in the ſummer; and whether it loſes them in boiling.

LINNÆUS, in his *Flora Suecica*, mentions it as being hurtful to Sheep. Theſe uſeful animals are ſometimes found to all appearance poiſoned by eating ſome particular plant, which the Farmer would do well to diſcover.

As many poiſonous plants, under proper management, prove highly beneficial to mankind, ſo it is not improbable but this plant alſo might make ample amends.

It has been obſerved by many, that thoſe plants which change blue in drying, will generally dye blue: this is remarkably the caſe with this plant, nearly as much ſo as with the *Polygonum Tinctorium*, ſent to England from China by the late ingenious and indefatigable Mr. BLAKE, whoſe untimely death every ſincere friend to this country muſt deplore: and was it to undergo a proper management, it is probable that it would produce an Indigo ſomewhat ſimilar.

The *Dogs Mercury* grows plentifully in moſt woods and under hedges, flowering from the end of March to the middle of May. It has a ſtrong creeping perennial root like *Couch-graſs*, whereby it may be readily diſtinguiſhed from the *annual French Mercury*.

The ancients have taken notice that this plant was of two ſexes; but they miſtook the female for the male. The cultivation of the Date-bearing Palm furniſhed the *Egyptians* with the firſt obſervations on the ſexes of plants. The fruit of the female was of the utmoſt importance, as it ſupplied many of them with the principal part of their food. The inhabitants of countries where Palms grew naturally, might eat the fruit regardleſs of their manner of fructification; but when other countries, that were deſtitute of this ample proviſion of nature, attempted to tranſplant and cultivate Palms, they muſt neceſſarily have been obliged to attend to the two kinds, the male and the female, as the firſt bore no fruit, and the latter would prove barren if it was removed too far from the male.

It does not appear that the *Jews* were acquainted with the ſexes of Palms, although they are often mentioned in the Bible as growing in *Judea:* but it was well known to THEOPHRASTUS, who deſcribes the method of impregnating the female bloom with the farina of the male, in the ſame manner as modern travellers have ſeen it performed *. But although it is now two thouſand years ſince this author wrote, yet no progreſs was made in demonſtrating the ſexual ſyſtem of plants until this preſent century; before which time, all the writers on Botany, inſtead of aſcertaining what plants were of different ſexes, mention male and female oaks, and other kinds of trees, that have both male and female bloom, on the ſame plants.

The utility of this kind of knowledge appears in the management of the Date-bearing Palm: for want of attending to it, the cultivators of hemp frequently meet with conſiderable diſappointments; and it is probable that the planters of hops, by their cuſtom of deſtroying the male plants, may alſo be ſufferers.

We do not remember that any of the early poets have mentioned the different ſexes or mutual love of trees. CLAUDIAN, who was well acquainted with *Egypt*, has very happily introduced it in his deſcription of the beautiful retreat of *Venus* in the *Iſland* of *Cyprus*.

" *Vivunt in Venerem frondes, omniſque viciſſim*
" *Fœlix arbor amat, nutant ad mutua palmæ*
" *Fœdera, populeo ſuſpirat populus ictu*
" *Et platana platanis, alno aſſibilat alnus.*"

" *Branches on branches twin'd compoſe the grove,*
" *And ſhoot, and ſpread, and bloſſom into love:*
" *The trembling palms their mutual vows repeat,*
" *And bending poplars bending poplars meet:*
" *The diſtant platanes ſeem to preſs more nigh,*
" *And to the ſighing alders alders ſigh.*"

EUSDEN.

The reader will determine how far this tranſlation deſerves the cenſure that it lies under, and whether the following paſſage that accompanies it is worthy of its author: " *As flowers, which are the loweſt of vegetables,* " *are the moſt gaudy, and do many times grow in great plenty at the bottom of ponds and ditches.*" Art of ſinking in Poetry, publiſhed by POPE.

* Vid. HASSELQUIST.

LYCHNIS DIOICA FLORE RUBRO. RED CAMPION.

LYCHNIS *Linnæi Gen. Pl.* DECANDRIA PENTAGYNIA.

hæc ſpecies vero dioica eſt.

Cal. 1-phyllus, oblongus, lævis. *Petala* 5unguiculata. *Limbo* ſubbifido.

Capſ. 5-locularis.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

LYCHNIS *dioica* floribus dioicis. *Linnæi Syſt. Vegetab. p.* 362. *Fl. Suecic. p.* 156. *Sp. Pl. p.* 626.

LYCHNIS floribus ſexu diſtinctis. *Haller hiſt. n.* 923.

LYCHNIS *dioica.* *Scopoli Fl. Carniol. n.* 530.

LYCHNIS ſylveſtris ſive aquatica purpurea ſimplex. *Bauhin. Pin.* 204.

LYCHNIS ſylveſtris flore rubro. *Parkinſon* 631.

LYCHNIS ſylveſtris rubello flore. *Gerard emac.* 469. *Raii Syn.* 339. Red Flowered Wild Campion. *Hudſon Fl. Angl.* 174.

RADIX perennis, minimi digiti craſſitudine, alba, ſapore ſubacri et amaro, fibris multis donata.

CAULES ex una radice plures, erecti, pedales, aut tripedales etiam, teretes, hirſuti, geniculati, purpurei, geniculis incraſſatis, ramoſi, ramis ſuperioribus dichotomis.

FOLIA oppoſita, connata, ovato-acuminata, hirſuta, ſubnervoſa.

CALYX: PERIANTHIUM monophyllum, tubuloſum, hirſutum, ſtriatum, purpureum, quinquedentatum, perſiſtens, *fig.* 1; in femineâ turgidior, *fig.* 2.

COROLLA: PETALA quinque obcordata, purpurea, patentia, *fig.* 3; ad baſin laminæ, unguiculæ obtuſæ, bifidæ aut quadrifidæ, *fig.* 4.

STAMINA: FILAMENTA decem, ſubulata, alba, quorum quinque longiora: ANTHERÆ flaveſcentes, *fig.* 5.

PISTILLUM: GERMEN ovatum: *Nectario* ad baſin cinctum, *fig.* 6: STYLI quinque longi: albi: villoſi: STIGMATA ſimplicia, *fig.* 7.

PERICARPIUM: CAPSULA unilocularis, ore decemdentato, *fig.* 8.

SEMINA plurima, cana, ſcabriuſcula, *fig.* 9.

ROOT perennial, the thickneſs of the little finger, white, of a ſlightly acrid and bitter taſte, furniſhed with numerous fibres.

STALKS ſeveral from one root, upright, from one to three feet high, round, hirſute, jointed, purple, the joints ſwelled, branched, the uppermoſt branches forked.

LEAVES oppoſite, connate, oval-pointed, hirſute, and ſlightly nervous.

CALYX: a PERIANTHIUM of one leaf, tubular, hairy, ſtriated, purple, having five teeth, and continuing, *fig.* 1; in the female more turgid, *fig.* 2.

COROLLA: five purpliſh heart-ſhaped PETALS, ſpreading, *fig.* 3: at the bottom of the lamina or broad part of the petal, are two or four ſmall upright white blunt leaves, or additional petals, *fig.* 4.

STAMINA: ten white tapering FILAMENTS, of which five are longer than the others: ANTHERÆ yellowiſh, *fig.* 5.

PISTILLUM: GERMEN oval, ſurrounded by a *Nectary* at bottom, *fig.* 6: STYLES five, long and white: STIGMATA ſimple, *fig.* 7.

SEED-VESSEL a CAPSULE of one cavity, the mouth having ten teeth, *fig.* 8.

SEEDS numerous, grey and rough, *fig.* 9.

The *Lychnis* tribe in general produce both Stamina and Styles in the ſame flower; but in this ſpecies we ſee a remarkable inſtance of the capricious inconſtancy of nature, who ſeems to ſpurn the fetters of ſyſtematic diſtinction, and laughs at man's attempt of ſubjecting her to particular rules; for here the Stamina and Styles grow on ſeparate plants; yet they are placed by LINNÆUS in his Claſs *Decandria.* What could he have done in this caſe? Had he placed it under *Monoecia,* he would have ſeparated plants evidently of the ſame genus: ſtill, however, it may be ſaid, he would have made the inveſtigation of the plant eaſier to the botanic ſtudent; nor would it have been the only inſtance where plants nearly ſimilar are diſunited, as in the *Anthoxanthum* and *Holcus,* which evidently belong to the Graſſes, yet are in ſeparate Claſſes.

Excluſive of this ſingular variation with regard to the ſex, there is a no leſs remarkable difference with reſpect to the colour of the flowers in different plants; ſome being conſtantly white and others as conſtantly red; this with ſome other circumſtances relative to the two plants, has led me to ſuſpect that they are not varieties, but diſtinct ſpecies: cultivation and further attention to them, will enable me to ſpeak of this with more certainty.

The red ſort here figured, grows in great abundance in moiſt ſhady ditches and by the ſides of hedges, and ſometimes in woods. It flowers in May and June.

Both the white and red are cultivated when double, and called by the Gardeners about town *Batchelors Buttons,* a name which ſeems with more propriety to belong to ſome of the double flowering *Crowfoots,* as the *Ranunculus acris* and *aconitifolius.*

The Aurelians, or thoſe who collect Inſects of the Moth and Butterfly kind, frequently catch the *Sphinx porcellus,* or *ſmall Elephant Hawk Moth,* on the flowers of this plant in the evening, and where it grows in abundance.

The ſeeds are liable to be eaten within the ſeed-veſſel, in July and Auguſt, by a Caterpillar which produces a *browniſh coloured Moth,* not figured, nor I believe hitherto noticed by any Entomologiſt.



Lychnis dioica L.



Stellaria Holostea

STELLARIA HOLOSTEA. THE GREATER STICHWORT.

STELLARIA *Linnæi Gen. Pl.* DECANDRIA TRIGYNIA.

Cal. 5-phyllus, patens. *Petal.* 5. bipartita. *Capſ.* 1-locularis, polyſperma.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

STELLARIA *Holoſtea* foliis lanceolatis ſerrulatis, petalis bifidis. *Lin. Syſt. Vegetab. p.* 352. *Fl. Suec. p.* 150.

ALSINE foliis gramineis ciliatis. *Haller Hiſt. No.* 884.

STELLARIA *Holoſtea. Scopoli Fl. Carniol. p.* 314.

CARYOPHYLLUS holoſteus arvenſis glaber flore majore. *Bauhin Pin.* 210.

GRAMEN leucanthemum, *Gerard emac.* 47. *Parkinſon.* 1325. *Raii Syn.* 346. The Greater Stichwort. *Hudſon Fl. Angl. p.* 166.

RADIX tenui et infirma radicula, ſummo ceſpite geniculata reptat, demiſſis tamen altius fibris.

ROOT weak, ſlender, and jointed, creeps on the ſurface of the ground, ſending down fibres to a conſiderable diſtance.

CAULES plures, denſe naſcuntur, erecti, pedales, quadrati, geniculati, ſcabriuſculi, fragiles, baſi pertenues.

STALKS ſeveral, growing thickly together, upright, a foot high, ſquare, jointed, roughiſh, brittle, very ſlender at bottom.

FOLIA lanceolato-acuminata, ſubconnata, rigidula, inferne carinata, ſerrulata, ſeu potius ſetis rigidiuſculis ciliata, ſuperiora adſcendentia, marginibus revolutis, e cœruleo-vireſcentia, inferiora crebriora, breviora, deorſum flexa, flava.

LEAVES narrow and pointed, at their baſes ſlightly uniting, ſomewhat ſtiff, underneath keel-ſhaped, ſerrated at the edges, or rather edged with very fine ſtiff hairs or briſtles; the upper leaves growing ſomewhat upright, the edges turning back, of a bluiſh green colour; the lower leaves more numerous, ſhorter, bending back, and of a yellow colour.

FLORES albi, longis petiolis ſcabriuſculis inſidentes, e dichotomia caulis prodeuntes.

FLOWERS white, ſtanding on long rough foot-ſtalks, and proceeding from the forked diviſion of the ſtalk.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovato-lanceolatis, concavis, marginatis, lævibus, patentibus, perſiſtentibus, *fig.* 1.

CALYX: a PERIANTHIUM of five leaves, of an oval pointed ſhape, hollow, edged, ſmooth, ſpreading, and continuing, *fig.* 1.

COROLLA: PETALA quinque, magna, bipartita, obcordata, alba, nervoſa, baſi vireſcentia patentia, *fig.* 2.

COROLLA: five white PETALS, large, divided at top, heart-ſhaped, rib'd, green at bottom, ſpreading, *fig.* 2.

STAMINA: FILAMENTA decem, alba, ſubulata, corollâ breviora, alterna glandulâ flaveſcenti ad baſin inſtructa: ANTHERÆ flavæ, oblongæ, inſidentes, *fig.* 3.

STAMINA: ten white FILAMENTS, tapering, ſhorter than the corolla, the alternate ones furniſhed at bottom with a yellowiſh gland: ANTHERÆ yellow, oblong, fitting on the filaments, *fig.* 3.

PISTILLUM: GERMEN ſubrotundum: STYLI tres, filiformes, patentes: STIGMATA obtuſa, *fig.* 4.

PISTILLUM: GERMEN roundiſh: STYLES three, thread-ſhaped, ſpreading: STIGMATA bluntiſh, *fig.* 4.

PERICARPIUM: CAPSULA ſubrotunda, membranacea, unilocularis, ſexvalvis, *fig.* 6.

SEED-VESSEL a roundiſh membranous CAPSULE, of one cavity and ſix valves, *fig.* 6.

SEMINA plerumque quinque aut ſex majuſcula, aurantiaca, reniformia, pulchre crenulata, *fig.* 7.

SEEDS for the moſt part five or ſix, largiſh, of a deep orange colour and beautifully notched, *fig.* 7.

The *Stellaria Holoſtea* grows very common with us, and with its white delicate bloſſoms enlivens our woods and banks early in the Summer. Its ſeeds are very beautiful, and like the *Chickweed*, but larger.

A very pretty Moth, called by Aurelians *Leaſt Yellow Underwing*, whoſe hiſtory is unknown, is by them frequently caught hovering over the flowers of this plant when the ſun ſhines ſtrong.

AJUGA REPTANS. COMMON BUGLE.

AJUGA *Linnæi Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Corollæ labium ſuperius minimum. *Stamina* labio ſuperiore longiora.

Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

AUJGA ſtolonibus reptantibus. *Linnæi Sp. Pl. p.* 705.

BUGULA foliis ovato dentatis, flagellis reptans. *Haller hiſt. n.* 282.

BUGULA reptans. *Scopoli Fl. Carniol. n.* 716.

CONSOLIDA media pratenſis cœrulea. *Bauhin Pin.* 260.

BUGULA vulgaris. *Parkinſon* 525.

BUGULA *Gerard emac.* 631. *Raii Syn. p.* 245. Bugle. *Hudſon Fl. Angl. p.* 219.

RADIX perennis, fibroſa.

ROOT perennial and fibrous.

STOLONES plurimæ, repentes, ex ſuperiore parte radicis naſcuntur.

CREEPERS or ſhoots, in great numbers ſpring from the upper part of the root, and creep on the ground.

CAULIS erectus, ſemipedalis, quadratus, hirſutus, preſertim inter flores, purpureus.

STALK upright, about ſix inches high, ſquare, hairy, particularly among the flowers, of a purple colour.

FOLIA oppoſita, ovata, baſi anguſtiora, connata, dentata, venoſa, ſæpe purpurea et nitida; Bracteæ purpureæ, foliis ſimiles at minores et breviores.

LEAVES oppoſite, oval, narroweſt at bottom and joining together, indented at the edges, veiny, often purple and ſhining; Floral-leaves like the others, but ſmaller and ſhorter.

FLORES cœrulei, ſpicati, verticillati.

FLOWERS blue, growing in whirled ſpikes.

CALYX: PERIANTHIUM monophyllum, ſemiquinquefidum, piloſum, nervoſum, cœruleſcens, laciniis ſubæqualibus, acutis, duobus inferioribus magis approximatis, *fig.* 1.

CALYX: a PERIANTHIUM of one leaf, half divided into five ſegments, hairy, nervous, bluiſh; the ſegments nearly equal, ſharp; the two lowermoſt approaching neareſt together, *fig.* 1.

COROLLA monopetala, ringens, tubus cylindraceus, incurvus, labium ſuperius breviſſimum, bidentatum, inferius trifidum, ſubtus hirſutulum, cœruleum, venis albis pictum, *fig.* 2, 3.

COROLLA of one PETAL, gaping, the tube cylindrical, bent downward; the upper lip very ſhort, with two teeth; the lower lip trifid, a little hairy underneath, of a blue colour, painted with white veins, *fig.* 2, 3.

STAMINA: FILAMENTA quatuor alba, recta, labio ſuperiore longiora: ANTHERÆ flavæ, *fig.* 3.

STAMINA: four white FILAMENTS, ſtraight, longer than the upper lip of the Corolla: ANTHERÆ yellow, *fig.* 3.

PISTILLUM: GERMEN quadripartitum: STYLUS filiformis, ſitu et longitudine Staminum: STIGMATA bifidum, minimum, *fig.* 4, 5, 6.

PISTILLUM: GERMEN divided into four parts: STYLE thread-ſhaped, the length of and in the direction of the Stamina: STIGMA bifid and very ſmall, *fig.* 4, 5, 6.

NECTARIUM Glandula flava ad baſin Germinis unde Calyx ſubventricoſus fit, *fig.* 7.

NECTARY a yellow gland at the baſe of the Germen which makes the Calyx protuberate, *fig.* 7.

SEMINA quatuor, ovata in fundo Calycis, *fig.* 8.

SEEDS four, of an oval ſhape in the bottom of the Calyx, *fig.* 8.

The *Bugle* is another of our Engliſh plants which may be recommended as an addition to our gardens. It is fond of a ſhady and moiſt ſituation, and readily propagates itſelf by means of its creeping ſhoots.

According to RAY, a variety with red flowers grows plentifully in the ſecond field on the left hand going from *Weſton-Green* to *Eltham*; and with white flowers it has been found in *Charlton-Wood*. The leaves in the Winter are often of a beautiful purple colour. It flowers in all our woods about town from May to July.

The character of this genus is taken from the ſhortneſs or rather want of the upper lip of the flower: excluſive of this mark, it is very nearly related to the genus *Glechoma* or *Ground-Ivy*. It has a conſiderable large gland at the baſe of the germen in the bottom of the calyx, which occaſions the latter to protuberate. This gland, however, is not peculiar to this genus, but occurs in moſt of the plants of the ſame claſs, from whence the bees collect a great part of their honey.

It has been conſidered by the old writers as an excellent vulnerary, applied both inwardly and outwardly, particularly ſo in *France*, where, according to RAY, it is common for them to ſay *That thoſe who have Bugle and Sanicle need no Surgeon.*



Ajuga reptans



Poa pratensis

POA PRATENSIS. SMOOTH STALK'D MEADOW GRASS.

POA *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis, multiflorus. *Spiculæ* ovatæ; valvulis margine ſcarioſis, acutiuſculis.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

POA *pratenſis* panicula diffuſa, ſpiculis ſubquinqueflоris, culmo erecto lævi, membrana foliorum obtuſo.

POA *pratenſis* panicula diffuſa, ſpiculis quinqueflоris glabris, culmo erecto tereti. *Linnæi Syſt. Vegetab. p.* 97. *Fl. Suecic.* 82.

POA *pratenſis*. *Scopoli Fl. Carniol. p.* 70. *n.* 100. *Diagn.* Panicula diffuſa ſpiculæ 2-3 floræ. Glumis inæqualibus, lanugine nulla.

POA panicula diffuſa locuſtis trifloris glabris. *Haller Hiſt. n.* 1465. ſecundum *Scopoli*.

GRAMEN pratenſe paniculatum medium. *Raii Syn.* 409. The greater or middle ſort of Meadow Graſs. *Bauhin Pin.* 2. pratenſe minus. *Gerard* 2. *Parkinſon* 1156.

RADIX perennis, *repens*, intra terram fiſſuraſque murorum facile penetrans.

ROOT perennial and *creeping*, eaſily penetrating into the earth and crevices of walls.

CULMI plerumque pedales, erecti, *læves*, vix manifeſte ſtriati.

STALKS generally about a foot high, upright, *ſmooth*, ſcarce perceptibly ſtriated.

FOLIA lævia, ſaturate viridia, ſubinde glauca, membranâ *brevi obtuſa* inſtructa, *fig.* 11.

LEAVES ſmooth, of a deep green colour, ſometimes bluiſh, furniſhed with a *ſhort blunt* membrane, *fig.* 11.

PANICULA erecta, diffuſa.

PANICLE upright and ſpreading.

SPICULÆ ovato-acutæ, plerumque quinqueflоræ, etiam biflоræ, utrinque compreſſæ, *fig.* 1, 2.

SPICULÆ oval-pointed, generally with five flowers, ſometimes only two, flattened on each ſide, *fig.* 2.

CALYX: GLUMA bivalvis, valvulis inæqualibus, acuminatis, concavis, *fig.* 3.

CALYX: a GLUME of two valves, unequal, acuminated and hollow, *fig.* 3.

COROLLA: GLUMA bivalvis, valvulæ ſubæquales, altera concava, carinâ ad lentem viſa ſcabriuſcula, altera planiuſcula, *fig* 4; in fundo calycis *lanugo* obſervanda, *evulſis floſculis*, *fig.* 3, 5.

COROLLA: a GLUME of two valves, the valves nearly equal; the one concave, with the keel appearing ſomewhat rough if magnified; the other flattiſh, *fig.* 4: in the bottom of the calyx a filamentoſe or woolly ſubſtance is apparent when the flowers are drawn out of it, *fig.* 3, 5.

STAMINA: FILAMENTA tria, capillaria, glumis longiora: ANTHERÆ utrinque bifurcæ, *fig.* 6.

STAMINA: three FILAMENTS, thread-like, longer than the glumes: ANTHERÆ forked at each end, *fig.* 6.

PISTILLUM: GERMEN ovatum: STYLI duo, ad baſin uſque ramoſi, *fig.* 7.

PISTILLUM: GERMEN oval: STYLES two, branched down to the bottom, *fig.* 7.

NECTARIUM: GLUMULÆ duæ ad baſin germinis, *fig.* 8, auct.

NECTARY: two little GLUMES at the baſe of the germen, *fig.* 8, magnified.

SEMEN anguloſum, acuminatum, baſi lanugine inſtructo, *fig.* 9. nat. mag. *fig.* 10, auct.

SEED angular and pointed, at bottom woolly, of its natural ſize, *fig.* 9; magnified *fig.* 10.

The *Poa pratenſis* and *Poa trivialis* approach very near each other in their general appearance, ſo much ſo, indeed, that the Botaniſt who is intimately acquainted with them, cannot, if he ſees them grow together, diſcriminate them at a little diſtance; and the characters from which modern Botaniſts have drawn their ſpecific differences, have been ſo vague and indeterminate, that the ſtudent is never able to ſatisfy himſelf whether he has found the one or the other; yet there are not two graſſes which afford more obvious or ſatisfactory marks of diſtinction. The difficulty which I have experienced myſelf in the inveſtigation of theſe two plants, has made me exceedingly attentive to them; and what I relate is the reſult of repeated obſervations, joined to a careful culture of them.

Theſe

Theſe graſſes differ chiefly in the following particulars: the *pratenſis* is in every part perfectly ſmooth; while in the *trivialis*, the ſtalk, leaves, ſheaths of the leaves, and branches of the panicle, all feel rough if the plant be drawn downward betwixt the thumb and finger: excluſive of this difference, which is a very good one for a common obſerver, in the *trivialis* the ſheath of the leaf is flatter and more deeply fluted: nor do the roots of theſe two plants differ leſs; the *trivialis* being ſimply fibrous; the *pratenſis* creeping, and ſending out many white ſhoots: but what diſtinguiſhes them moſt fully and moſt infallibly, is the difference in the membrane at the bottom of the leaf, where the ſheath begins; this in the *pratenſis* is very ſhort and blunt; in the *trivialis* it is long and pointed: and the beauty of this diſtinction is, that it is obvious to the moſt common obſerver; nor did I ever know it fail me, let the graſs vary ever ſo much in ſize and other particulars. They differ alſo with reſpect to the ſize of the ſpiculæ and the number of flowers contained in each: in the *trivialis* they are either biflorous or triflorous; in the *pratenſis* they are moſt commonly *quinqueflorous*. Such are the moſt obvious diſtinctions in the graſſes themſelves: other circumſtances contribute to render them ſtill more ſo. The *pratenſis* grows generally on walls; indeed there is not a wall in any of the villages around town on which it may not be found in abundance: it very frequently occurs on dry banks, and oftentimes in meadows. The *trivialis* is ſcarce ever found on walls, ſeldom on dry banks; but moſt frequently in moiſt meadows, or the ſides of ditches; ſo that the one graſs ſeems to delight in a dry, the other in a moiſt ſituation. They differ ſomewhat alſo in the time of their flowering; the *pratenſis* flowering about the third week in May, the *trivialis* the firſt week in June: and there is this remarkable with reſpect to the flowering of the *pratenſis*, that after it has flowered in the Spring, it ſhews no diſpoſition to flower during the Summer; while the *trivialis* is found in bloom, though not generally, during the whole of the Summer. Added to this, there is a firmneſs in the ſtalk of the *pratenſis* not perceivable in the *trivialis*. By an attention to theſe remarks, I truſt the young Botaniſt will acquire a clear idea of them, without having recourſe to the pubeſcence, &c. which, though laid ſo much ſtreſs on by LINNÆUS and SCOPOLI, is by no means adequate to the diſtinguiſhing of them. Indeed it is difficult to know rightly what they mean by *ſpiculis baſi pubeſcentibus*, as no pubeſcence is perceivable in them outwardly: but if one attempts to draw the floſcules out of the glumes of the calyx, we perceive a filamentoſe appearance, which ſeems to connect the florets and calyx together: but this appearance, which is indeed a very ſtriking and ſingular one, and which I have not yet obſerved in any other graſſes, takes place nearly in an equal degree in both: this ſubſtance adheres to the ſeed when ſeparated, and cauſes them to hang to one another as if there were cobwebs among them; ſo that a perſon ignorant of the cauſe, from an examination of ſuch ſeed, might conclude it old and good for nothing: this appearance is moſt ſtriking in the *trivialis*. RAY, whoſe deſcriptions always accord with nature, and are taken from the moſt obvious characters of the plant, mentions the roughneſs (*Culmi nonnihil aſperi*): but the particular ſhape of the membrane has not, that I know of, been noticed till now.

The *Poa pratenſis* may be conſidered as a valuable graſs, and one of thoſe which ought to enter into the compoſition of a good meadow or paſture: I ſay compoſition, becauſe I imagine every good meadow ſhould be compounded of a variety of graſſes, each having peculiar and valuable properties. We are not to expect all that can be wiſhed in a meadow in one graſs: ſome are calculated to produce food, and carry a beautiful verdure even in the depth of winter: ſome bring forth early ſhoots, and make choice food for cattle in the ſpring: ſome produce a large quantity of ſweet tender leaves at bottom; others by the weight and height of their ſtalks, and of their heads or panicles at top, increaſe the weight of the hay: ſome ſhoot ſtrongly and produce a large aftermath: ſome give a more agreeable ſmell to the hay. So that to have a good meadow, we ſhould have a variety of graſſes; and if we may argue from analogy, a variety of food may alſo be more grateful to cattle.

The principal advantages of the *Poa pratenſis* are, that it is a ſweet graſs, and eaten readily by cattle in general: it carries its verdure in the winter better than moſt others, and throws out young and numerous ſhoots in the ſpring, ſo as to make good ſpring food. It produces a good crop of leaves at bottom, which make exceeding fine hay, and is fit for cutting early in the ſpring.

There is a glaucous or bluiſh variety of this graſs occurs frequently in meadows: it varies alſo in the number of its floſcules, from three to five, or ſometimes more: as likewiſe in its ſize: when growing on walls or dry banks, it does not reach half the height which it does in fertile meadows.

PLANTAGO LANCEOLATA. NARROW-LEAVED PLANTAIN, or RIBWORT.

PLANTAGO *Linnæi Gen. Pl.* TETRANDRIA MONOGYNIA.

Cal. 4-fidus. *Cor.* 4-fida: limbo reflexo. *Stamina* longiſſima. *Capſ.* 2-locularis, circumſciſſa.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ, FLORE TETRAPETALO ANOMALÆ.

PLANTAGO lanceolata foliis lanceolatis, ſpica ſubovata nuda, ſcapo angulato. *Lin. Syſt. Vegetab. p.* 131.

PLANTAGO foliis lanceolatis quinquenerviis, ſcapo nudo, ſpica ovata. *Haller hiſt. n.* 656.

PLANTAGO *lanceolata. Scopoli Fl. Carniol. p.* 108. *n.* 163.

PLANTAGO anguſtifolia major. *Bauhin Pin.* 189.

PLANTAGO quinquenervia. *Gerard emac.* 422.

PLANTAGO quinquenervia major. *Parkinſon* 495. *Raii Syn. p.* 314. Ribwort or Ribwort-Plantain. *Hudſon Fl. Angl. p.* 52. *Oeder Fl. Dan. icon.* 437.

RADIX perennis, fuſca, fibris multis inſtructa, per ætatem præmorſa.

FOLIA longe petiolata, baſi purpurea, lanuginoſa, lanceolata, quoad latitudinem inſigniter variantia, quinquenervia, rariter dentata, hirſutula, erecta, nonnunquam vero patentia.

SCAPUS foliis longior, ſimplex, ſulcato-anguloſus, ſubtortuoſus, erectus.

SPICÆ ovato-oblongæ, nigricantes.

BRACTÆA ſingulo floſculo impoſita, ovato-acuminata, concava, *fig.* 1.

CALYX: PERIANTHIUM triphyllum, foliolis inæqualibus, duo lateralia cymbiformia, acuta, *fig.* 3; dorſale ovatum, obtuſum, emarginatum, lineis duabus viridibus notatum, *fig.* 2.

COROLLA monopetala, tubuloſa, membranacea, cylindraceo-globoſa, limbus quadripartitus, laciniis ovato-acutis, patentibus, dempto calyce reflexis, *fig.* 4.

STAMINA: FILAMENTA quatuor longiſſima: ANTHERÆ albidæ aut flaveſcentes, *fig.* 5.

PISTILLUM: GERMEN ovatum: STYLUS filiformis, ſtaminibus dimidio brevior: STIGMA ſimplex, *fig.* 6.

PERICARPIUM: CAPSULA ovata, bilocularis, circumſciſſa, diſſepimento libero, *fig.* 7, 8.

SEMINA duo, oblonga, nitida, ſuccinei coloris, hinc convexa inde concava, *fig.* 9, 10, 11.

ROOT perennial, of a brown colour, furniſhed with numerous fibres, when grown old appearing as if bitten off.

LEAVES ſtanding on long foot-ſtalks, purple and woolly at bottom, lanceolate, varying remarkably in their breadth, having five ribs, and a few teeth at the edges, ſomewhat hairy, upright, but ſometimes ſpreading.

FLOWERING-STALK longer than the leaves, ſimple, angular, and grooved, ſlightly twiſted and upright.

SPIKES of an oval oblong ſhape, and blackiſh colour.

BRACTEA or floral leaf, placed under each floſcule, oval-pointed, and concave, *fig.* 1.

CALYX: a PERIANTHIUM of three unequal leaves, the two ſide ones boat-ſhaped and pointed, *fig.* 3; the back leaf oval, obtuſe, emarginate, *fig.* 2, and marked with two green lines.

COROLLA monopetalous, tubular, membranous, of a form betwixt globular and cylindrical; the limb quadripartite; the ſegments of an oval pointed ſhape, and ſpreading, on the removal of the calyx turning back, *fig.* 4.

STAMINA: four very long FILAMENTS: ANTHERÆ white or yellowiſh, *fig.* 5.

PISTILLUM: GERMEN oval: STYLE filiform, half the length of the ſtamina: STIGMA ſimple, *fig.* 6.

SEED-VESSEL: an oval CAPSULE of two cavities, dividing horizontally in the middle, the diſſepimentum or partition looſe, *fig.* 7, 8.

SEEDS two, oblong, ſhining, of an amber colour, convex on one ſide and concave on the other, *fig.* 9, 10, 11.

The Farmers in general conſider this ſpecies of *Plantain* as a favourite food of ſheep, and other cattle; hence it is frequently recommended in the laying down of meadow and paſture land; and the ſeed is for that purpoſe kept in the ſhops. How far the predilection of cattle for this herb is founded in truth we cannot at preſent determine; nor do we pretend to ſay how far it is œconomical (ſuppoſing the fact to be ſo) to ſubſtitute this plant in the room of others which produce a much greater crop, and which they ſhew no averſion to. We ſhould be rather inclined to think, that *Plantain* (or *Rib-Graſs*, as it is called) ſhould be but ſparingly made uſe of, particularly if the Farmer's chief aim be a crop.

When the *Plantain* grows among paſturage, its leaves are drawn up to a conſiderable height: but when it occurs in a dry and barren ſoil, they are ſhorter, broader, and more ſpread on the ground; and ſometimes they aſſume a ſilvery hue.

It grows ſpontaneouſly by the ſides of roads, and in dry paſtures; flowering early in the ſummer.



Plantago lanceolata



Ranunculus hirsutus.

RANUNCULUS HIRSUTUS. PALE-LEAVED CROWFOOT.

RANUNCULUS *hirſutus* radice fibroſa annua, caule hirſuto, calycibus papilloſo-hiſpidis acuminatis, demum reflexis.

RANUNCULUS rectus foliis pallidioribus hirſutus. *J. Bauhin.* III. 417. *Raii Syn. p.* 247. Upright pale-leaved Crowfoot. *Raii Hiſt. Plant. p.* 582.

From having repeatedly obſerved, and carefully cultivated this plant, I find it to be perfectly diſtinct from the *bulboſus*, of which it is made a variety by ſome authors; though RAY and BAUHINE long ſince conſidered it as diſtinct.

As its ſtiff hairs are one of its characteriſtics, and conſtitute a part of its name in BAUHINE, I have made that its trivial name; and ſhall, by way of contraſt, enumerate the ſeveral particulars in which it differs from the *bulboſus*, to which, in its general appearance, it is nearly allied.

The root of the *bulboſus*, which forms one of the chief characters of that plant, is round and ſolid like a ſmall turnip, remaining in the ground from year to year, and annually ſending up new flowering ſtems: the root of the *hirſutus*, on the contrary, is ſimply fibrous and annual.

The ſtalk of the *hirſutus* is generally more branched and ſpreading, producing a greater number of flowers, and covered with ſtiffer and longer hairs, than in the *bulboſus:* the hairs indeed in the latter plant are more numerous and ſoft, approaching to pubeſcence or downineſs; while in the former they are more rigid, or approaching to hiſpidity. The foot-ſtalks of the bottom leaves in the *hirſutus* are hollow, and if cut aſunder, the nerves appear projecting into the inſide of the tube; the leaves themſelves are more perfectly trilobate than in the *bulboſus;* the middle and outermoſt lobe rounder, and leſs deeply divided at the edges. From the inner edge of each of the two ſide lobes, a bit appears as if cut away. Theſe leaves are frequently of a white or pale colour, in irregular ſpots, not unlike what we ſometimes meet with in the *Ranunculus Ficaria;* and the upper ſurface is full of little projecting points, from whence the hairs iſſue.

We come now to a character which this plant has in common with the *bulboſus*, viz. its reflexed calyx: this has been the cauſe of its having been conſidered by moſt Botaniſts as the *bulboſus;* not finding in LINNÆUS any other *Ranunculus* with a reflexed calyx, without any farther examination, they concluded this to be the ſame. But although the calyx when turned back reſembles that of the *bulboſus*, yet before the opening of the flower it is eſſentially different, being much more pointed, or as if it had been ſqueezed to a point with the fingers; and the outſide of it is very viſibly covered with little papillæ or projecting points, from whence the hairs proceed.

The flowers of this plant, as well as the ſeed, are alſo ſmaller than thoſe of the *bulboſus*.

Such are the characters whereby theſe two plants may with attention be diſtinguiſhed.

Nor do they differ leſs in their places of growth and times of flowering. The *bulboſus* grows in dry paſtures, and flowers in the month of May. The *hirſutus* flouriſhes more by the ſides of roads, in gardens, and rubbiſh, flowering from June to the end of the year.

I have obſerved this plant growing in great plenty by the ſide of the road betwixt *Croydon* and *Mitcham;* and I remember to have ſeen it near *Graveſend;* and plentifully by the ſea-ſide; on the gravelly banks about *Southampton;* alſo in various places near *London:* and there is no doubt but it is a much more common plant than Botaniſts may imagine.

No particular uſes have been attributed to it.

VERONICA *BECABUNGA*. BROOKLIME.

VERONICA *Linnæi Gen. Pl.* DIANDRIA MONOGYNIA.

Cor. limbo 5-partito, lacinia infima anguſtiore.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI, FLORE MONOPETALO.

VERONICA *Becabunga* racemis lateralibus, foliis ovatis planis, caule repente. *Lin. Syſt. Veg. p.* 57.

VERONICA foliis ovatis, ſerratis, glabris, ex alis racemoſa. *Haller hiſt. n.* 534.

VERONICA *Becabunga. Scopoli. Fl. Carniol. n.* 11.

ANAGALLIS aquatica minor folio ſubrotundo. *Bauhin pin.* 252.

ANAGALLIS aquatica vulgaris, ſive Becabunga. *Parkinſon* 1236.

ANAGALLIS ſive Becabunga. *Gerard emac.* 620.

VERONICA aquatica rotundifolia, Becabunga dicta minor. *Raii Syn.* 280. Common Brooklime. *Hudſon Fl. Angl. p.* 4. *Oeder Fl. Dan. Icon.* 511.

RADIX perennis, fibroſa, fibris plurimis, capillaribus, albis.

CAULES numeroſi, repentes, teretes, læves, craſſi, ſucculenti, rubentes, ramoſi.

FOLIA ovato-obtuſa, utrinque glabra, ſubcarnoſa, oppoſita, dentata, denticulis glandulâ terminatis.

FLORES pulchre cœrulei, ocello albo, racematim diſpoſiti, racemis ex utraque alâ prodeuntibus

CALYX: PERIANTHIUM quadripartitum, laciniis ovato-acutis, lævibus, corolla brevioribus, *fig.* 2.

COROLLA monopetala, ſubrotata, cœrulea, venis ſaturatioribus ad baſin ſtriatis, laciniis ſubovatis, infima anguſtiore, *fig.* 3.

STAMINA: FILAMENTA duo, alba, medio craſſiora: ANTHERÆ cœruleſcentes: POLLEN album, *fig.* 4.

PISTILLUM: GERMEN ſubrotundum, didymum: STYLUS apice incraſſatus, purpureus: STIGMA capitatum, *fig.* 5.

PERICARPIUM: CAPSULA ſubrotunda, compreſſa, bilocularis, quadrivalvis, *fig.* 6.

SEMINA plurima, ovata, fuſca, *fig.* 7, 8.

ROOT perennial, fibrous, the fibres numerous, very ſmall and white.

STALKS numerous, creeping, round, ſmooth, thick, ſucculent, of a reddiſh colour, and branched.

LEAVES oval and obtuſe, ſmooth on both ſides, ſomewhat fleſhy, oppoſite, indented at the edges, each little tooth terminated by a gland.

FLOWERS of a beautiful blue colour, with a white eye, growing in racemi or branches which proceed from the boſoms of the leaves on each ſide of the ſtalk.

CALYX: a PERIANTHIUM divided into four ſegments, which are of an oval pointed ſhape, ſmooth, and ſhorter than the corolla, *fig.* 2.

COROLLA monopetalous, ſomewhat wheel-ſhaped, of a blue colour, ſtriped at bottom with deeper veins of the ſame colour; the ſegments nearly oval: the lowermoſt narrower than the others, *fig.* 3.

STAMINA: two white FILAMENTS, thickeſt in the middle: ANTHERÆ blueiſh: the POLLEN white, *fig.* 4.

PISTILLUM: GERMEN roundiſh, double: STYLE thickeſt at top and purple: STIGMA forming a little head, *fig.* 5.

SEED-VESSEL: a roundiſh, flattened CAPSULE of two cavities and four valves, *fig.* 6.

SEEDS ſeveral, oval and brown, *fig.* 7, 8.

Brooklime grows very commonly in brooks and muddy waters, whence its name; and flowers in June and July. It is an officinal plant, and made uſe of in the ſcorbutic juices of the London Diſpenſatory, which ſeems to be the only purpoſe to which it is applied.

Veronica Beccabunga.





Poterium Sanguisorba

POTERIUM SANGUISORBA. BURNET.

POTERIUM *Linnæi Gen. Pl.* MONŒCIA POLYANDRIA.

Raii Syn. Gen. 10. HERBÆ FLORE PERFECTO SIMPLICI, SEMINIBUS NUDIS SOLITARIIS SEU AD SINGULOS FLORES SINGULIS.

POTERIUM *Sanguiſorba* inerme caulibus ſubangulosis. *Lin. Sp. Pl.* 1411.

PIMPINELLA polyſtemon. *Haller hiſt. n.* 706.

SANGUISORBA minor. *J. Bauhin* III. 2. 113.

PIMPINELLA Sanguiſorba minor hirſuta. *Bauhin pin.* 160.

PIMPINELLA vulgaris minor. *Parkinſon* 582.

PIMPINELLA ſylveſtris. *Gerard. emac.* 1045. *Raii Syn. p.* 203, Burnet. *Hudſon Fl. Angl. p.* 358.

RADIX perennis, ſimplex, albida, in terram alte deſcendens.

CAULES plures, ſuberecti, dodrantales aut pedales, ramoſi, ſtriati, ſubanguloſi, rubicundi, læves, ad baſin hirſutuli.

FOLIA alterna, pinnata, pinnis inferioribus ſubrotundis, plerumque oppoſitis, ſerratis, lævibus, ſubtus cœruleſcentibus, nervo medio hirſutulo, caulinis ovatis et ovato-acutis.

STIPULÆ dentatæ.

FLORES in capitulis ſubrotundis congeſti, ſuperiores feminei, inferiores maſculi, ſæpe etiam hermaphroditi.

CALYX: PERIANTHIUM triphyllum, inferum, foliolis membranaceis, marceſcentibus, *fig.* 1.

COROLLA quadripartita, laciniis ovatis, ſæpe coloratis, concavis, patentibus, baſi coalitis, *fig.* 2: in flore maſculo ſeu hermaphrodito et calyx et corolla majores ſunt.

STAMINA: FILAMENTA circiter triginta, longa, pendula, rubra: ANTHERÆ flavæ, biloculares, loculis ſemilunatis, *fig.* 3, 4, 5.

PISTILLUM in flore femineo: GERMEN quadrangulum: STYLUS capillaris: STIGMA ruberrimum, penicilliforme, *fig.* 7, 8, 9, auct. Styli et Stigmata duo ſæpe occurrunt: in flore hermaphrodito Styli duo breviores, Stigmatibus minus expanſis, *fig.* 10.

PERICARPIUM BACCA exſucca, tetragona, lateribus rugoſis, continens Semina duo, pallide fuſca, *fig.* 11, 12.

ROOT perennial, ſimple, whitiſh, penetrating deeply into the earth.

STALKS ſeveral, nearly upright, from nine inches to a foot in height, branched, ſtriated, ſomewhat angular, of a reddiſh colour, ſmooth, but ſlightly hairy at bottom.

LEAVES alternate and pinnated; the lowermoſt pinnæ, or ſmall leaves, roundiſh, generally oppoſite, ſerrated, ſmooth, underneath blueiſh; the midrib ſlightly hairy; the leaves of the ſtalk oval and pointed oval.

STIPULÆ indented.

FLOWERS growing in little round heads, the uppermoſt female, the lowermoſt male, and oftentimes hermaphrodite.

CALYX: a PERIANTHIUM of three leaves, placed below the Germen; the leaves membranous and withering, *fig.* 1.

COROLLA divided into four ſegments, which are oval, often coloured, concave, ſpreading, and uniting at bottom, *fig.* 2: in the male or hermaphrodite flower both the Calyx and Corolla are larger.

STAMINA: FILAMENTS about thirty, long, pendulous, and of a red colour: ANTHERÆ yellow, bilocular, the cavities ſemilunar, *fig.* 3, 4, 5.

PISTILLUM in the female flower: GERMEN quadrangular: STYLE capillary: STIGMA very red, and pencil-ſhaped, *fig.* 7, 8, 9, magnified. Two Styles and Stigmata often occur: in the hermaphrodite flower the Styles are ſhorter, and the Stigmata leſs expanded, *fig.* 10.

SEED-VESSEL a juiceleſs BERRY, having four wrinkled ſides, and containing two pale brown Seeds, *fig.* 11. 12.

Burnet is one of thoſe plants which has for ſome years paſt been attempted to be introduced into agriculture, but not anſwering the farmers expectations, is now in a great degree laid aſide. Cattle are ſaid not to be fond of it; nor is its produce ſufficient to anſwer the expence attending its culture. It is to be lamented that perſons do not pay a little more attention to the nature of plants before they ſo warmly recommend them. It ſhould ſeem very unlikely, *a priori*, that a ſmall plant, ſcarce ever met with but on hilly and chalky ground, and to which cattle in ſuch ſituations do not ſhew any particular attachment, ſhould afford better or more copious nouriſhment, than the *Clovers* and other plants already in uſe. It is not meant by this, however, to diſcourage that laudable ſpirit of improvement which ſo happily prevails at preſent, but to caution ſuch as introduce any new plant, to make themſelves thoroughly acquainted with its natural hiſtory.

The leaves of this plant, when bruiſed, ſmell ſomewhat like Cucumber, and are uſed by ſome as a ſalad, and by others added to a cool-tankard to give it an agreeable flavour.

LINNÆUS places it among his Monoicous plants, the flowers on the top of the heads being female, and thoſe at the bottom male, contrary to what occurs in moſt plants of that claſs; but it happens very frequently, that the bottom flowers have likewiſe in them two Piſtils, although not ſo conſpicuous as in the female flowers, the Stigmata being not ſo much branched; hence, there being female and hermaphrodite flowers on the ſame plant, it would perhaps with more propriety be placed in the claſs *Polygamia*. Do not theſe obſcure hermaphrodite flowers contribute to the fertility of the plant?

MALVA SYLVESTRIS. COMMON MALLOW.

MALVA *Linnæi Gen. Pl.* MONADELPHIA POLYANDRIA.

Cal. duplex: exterior triphyllus. *Arilli* plurimi monoſpermi.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

MALVA *ſylveſtris* caule erecto herbaceo, foliis ſeptemlobatis acutis, pedunculis petioliſque piloſis. *Linnæi Syſt. Vegetab. p.* 520.

MALVA caule erecto; foliis lobatis; lobis ſerratis, quinis et ſeptenis. *Haller hiſt. n.* 1069.

MALVA *ſylveſtris. Scopoli Fl. Carniol. n.* 859.

MALVA *ſylveſtris* folio ſinuato. *C. Bauhin. pin.* 314.

MALVA vulgaris. *Parkinſon.*

MALVA *ſylveſtris. Gerard. Raii Syn. p.* 269, Common Mallow. *Hudſon Fl. Angl. p.* 268.

RADIX perennis, albida, craſſitie digiti, in terram alte deſcendens, fibris paucis majuſculis inſtructa, ſapore dulci et viſcido prædita.

CAULIS plerumque erectus, pedalis ad tripedalem, teres, piloſus, ramoſus.

FOLIA petiolis prælongis hirſutis inſidentia, quinque aut ſeptemlobata, ad baſin maculâ purpurea ſæpe notata, ſubplicata, crenata, ſuperne lævia, ſubtus hirſutula.

FLORES ampli, purpurei, axillares, ſubumbellati, venis ſaturatioribus picti.

STIPULÆ duæ ad baſin cujuſvis petioli.

CALYX: PERIANTHIUM duplex, perſiſtens, hirſutum, exterius triphyllum, foliolis lanceolatis, *fig.* 1; interius ſemiquinquefidum, majus, laciniis ovato-acutis, *fig.* 2.

COROLLA: PETALA quinque, obcordata, præmorſa, baſi coalita, plana, *fig.* 3.

STAMINA: FILAMENTA plurima in tubum purpuraſcentem coalita, *fig.* 5, ſuperne laxa, reflexa: ANTHERÆ reniformes, albidæ, *fig.* 6, auct.

PISTILLUM: GERMEN orbiculatum: STYLUS cylindraceus, brevis: STIGMATA plurima, ſetacea, rubicunda, longitudine Styli, *fig.* 7, 8, 9.

SEMINA plurima reniformia *Arillo* introrſum dehiſcente tecta, *fig.* 10, 11.

ROOT perennial and whitiſh, the thickneſs of ones finger, ſtriking deep into the earth, thinly furniſhed with large fibres, and having a ſweetiſh viſcid taſte.

STALK generally upright, from one to three feet high, round, hairy, and branched.

LEAVES ſtanding on long hairy foot-ſtalks, having five or ſeven lobes, often marked at bottom with a purple ſpot, ſomewhat folded, crenated or notched at the edges, ſmooth above, and ſlightly hairy beneath.

FLOWERS large, purple, growing in a kind of umbell in the boſoms of the leaves, painted with deeper veins of the ſame colour.

STIPULÆ two at the bottom of each foot-ſtalk of the leaf.

CALYX: a double PERIANTHIUM continuing, and hairy; the outer one compoſed of three leaves, which are narrow and pointed, *fig.* 1; the inner one larger and divided into five ſegments, which are broader and pointed, *fig.* 2.

COROLLA: five PETALS heart-ſhaped, a piece of the apex as if bitten out, uniting at bottom, and flat, *fig.* 3.

STAMINA: FILAMENTS numerous, uniting into a purpliſh tube, *fig.* 5, above unconnected and turning back: ANTHERÆ kidney ſhaped, and whitiſh, *fig.* 6, magnified.

PISTILLUM: GERMEN orbicular: STYLE cylindrical, and ſhort: STIGMATA numerous, thread-ſhaped, of a red colour, the length of the Styles, *fig.* 7, 8, 9.

SEEDS numerous, kidney-ſhaped, covered with an *Arillus* which opens inwardly, *fig.* 10, 11.

Every part of this plant, but more particularly the root, contains within it a juice ſomewhat mucilaginous, hence it has been ranked by writers on the *Materia Medica* among the emollients, and conſidered as ſerviceable in all caſes where emollients are proper: but it has more particularly been uſed in diſeaſes of the urinary paſſages, where the parts have been either injured by calculous concretions, or inflamed from other cauſes; as in the ſtone, gravel, bloody urine, ſtrangury, gonorrhæa, &c. In caſes of cough, hoarſeneſs, roughneſs of the fauces, &c. it has alſo been recommended. Its uſe however has been much ſuperſeded by the *Marſhmallow*, which poſſeſſes all its valuable qualities in a ſuperior degree. The method of uſing it is by making a decoction of the leaves or root: or it may be made into a ſyrup in the manner of *Marſhmallows*. In fomentations and clyſters the leaves are alſo not unfrequently uſed.

Mallows were formerly eaten as food by the *Romans*; not the ſpecies here figured however; but according to HALLER, the *Malva rotundifolia italica flore amplo* of TOURNEFORT was uſed for this purpoſe. This author alſo informs us, that a tree of the *Mallow* kind is in like uſe with the *Egyptians*; and that the *Chineſe* mix dried *Mallow* leaves with their food.

Cattle do not appear to be fond of it; and as it is a ſtrong growing plant, it often does much harm in good rich ground: the root however, though perennial, is not of the creeping kind, and conſequently is eradicated without much difficulty. The beſt inſtrument will be found to be what is called a docking-iron, of which we ſhall give an account in deſcribing ſome one of the *Docks*; and the beſt time for taking them up is late in the Autumn, when the herbage being eat down pretty cloſe, the leaves of the *Mallow* are eaſily diſcerned, and the herbage ſuffers little from the operation.

The *Mallow* flowers from June to the end of Summer. The Antheræ before the opening of the flower, while they are yet entire, afford a very pleaſing ſpectacle, and are figured by GREW, in a magnified ſtate, in his *Anatomy of Plants*.



Malva sylvestris



Poa trivialis

POA TRIVIALIS. ROUGH-STALK'D MEADOW GRASS.

POA *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis, multiflorus. *Spicula* ovata: valvulis margine ſcarioſis acutiuſculis.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

POA *trivialis* panicula diffuſa, ſpiculis ſubtrifloris, culmo erecto ſcabro, membranâ foliorum acuminata.

POA *trivialis* panicula diffuſa, ſpiculis trifloris baſi pubeſcentibus, culmo erecto tereti, *Linnæi Syſt. Vegetab. p.* 97.

GRAMEN pratenſe paniculatum medium. *Bauhin pin.* 5. *Raii Syn. p.* 409. *n.* 2.

POA *trivialis*. *Scopoli Fl. Carniol. p.* 69. *n.* 39. *Diagn.* Lanugo ad baſin petali exterioris.

POA panicula diffuſa locuſtis trifloris villoſis. *Haller hiſt. n.* 1562. ſecundum Scopoli.

GRAMEN pratenſe minus. *Parkinſon* 1156. *Gerard emac.* 2. *Hudſon Fl. Angl. p.* 33.

RADIX fibroſa, capillacea.

CULMUS erectus, pedalis ad bipedalem, baſi repens, unde perenne evadit hoc gramen, ſtriatus, ſcabriuſculus, ſæpe purpureus.

FOLIA: VAGINA ſubcompreſſa, ſtriata, ſcabriuſcula: MEMBRANA ad baſin foliorum *longa, acuminata, fig.* 1; folia ipſa longa, ſcabriuſcula, ſubtus nitida, tenera.

PANICULA erecta, diffuſa.

SPICULÆ parvæ, biflorae, aut trifloræ, (*fig.* 2. 2. magn. nat. *fig.* 3. 3. lente auct) nonnunquam etiam quadrifloræ, ovato-acuminatæ, ſubcompreſſæ.

GLUMÆ calycinæ bivalves, valvulis inæqualibus, acuminatis, carinatis, carinâ ſcabrâ, *fig.* 4. Si glumæ corollaceæ ex calycinis glumis extrahantur, lanugo (*fig.* 9) conſpiciatur, huic et *Poæ pratenſi* quouſque obſervavi propria.

GLUMÆ corollaceæ bivalves, valvulis ſubæqualibus, acutis.

STAMINA: FILAMENTA tria, capillaria, glumis paulo longiora, *fig.* 6: ANTHERÆ flavæ aut purpuraſcentes, demum utrinque furcatæ, *fig.* 6.

PISTILLUM: GERMEN minimum, ovatum: STYLI duo ad baſin fere plumoſi, *fig.* 7.

NECTARIUM: GLUMULÆ duæ teneræ ad baſin germinis, *fig.* 8.

SEMEN oblongo acuminatum, anguloſum, baſi lanugine inſtructum, *fig.* 10.

ROOT fibrous and capillary.

STALK upright, from one to two feet high, creeping at the bottom, whence this graſs becomes perennial, ſtriated, rough, and often purple.

LEAVES: the SHEATH flattiſh, ſtriated, roughiſh; the MEMBRANE at the baſe of the leaf *long* and *pointed, fig.* 1; the leaves themſelves long, ſomewhat rough, ſhining underneath, and tender.

PANICLE upright and ſpreading.

SPICULÆ ſmall, containing two or three flowers, (*fig.* 2. 2. of their natural ſize, *fig.* 3. 3. magnified) and ſometimes even four flowers, of an oval pointed ſhape, and flattiſh.

GLUMES of the Calyx compoſed of two valves, which are unequal, pointed, and have the keel, or rib on the back, rough, *fig.* 4. If the glumes of the corolla are drawn out of the glumes of the calyx, a woolly ſubſtance (*fig.* 9) is obſervable, and which, as far as I have hitherto noticed, is peculiar to this Graſs and the *Poa pratenſis.*

GLUMES of the corolla of two valves, the valves nearly equal and pointed, *fig.* 3.

STAMINA: three capillary FILAMENTS a little longer than the glumes, *fig* 6: ANTHERÆ yellow or purpliſh, finally becoming forked at each end, *fig.* 6.

PISTILLUM: GERMEN very ſmall and oval: STYLES two, feathered almoſt to the bottom, *fig.* 7.

NECTARY: two little tender GLUMES at the bottom of the germen, *fig.* 8.

SEED oblong and pointed, angular, and furniſhed with a woolly ſubſtance at bottom, *fig.* 10.

The means of diſtinguiſhing this Graſs from the *Poa pratenſis* (for which it is the moſt liable to be miſtaken) with many other particulars relative to it, we have already given under the latter: conſidered in an agricultural light, it is certainly one of our beſt graſſes, both for hay and paſturage; indeed a good meadow can ſcarcely be formed without it. Its chief qualities are, that it produces a large quantity of ſweet tender leaves, which are preferred by cattle to moſt others, and which are convertible into exceeding fine hay. It is an early graſs, flowering about the beginning of June. It does not bear the froſts of the Winter ſo well, nor does it ſhoot ſo early in the Spring as the *Poa pratenſis*; but when the weather comes to be ſo warm as to make the graſſes in general ſhoot, this grows faſter, and produces a greater crop of bottom leaves (the moſt deſirable part of graſſes) than moſt others.

It grows beſt in meadows that are tolerably moiſt: in dry paſtures it is often found, but much ſmaller.

Hints relative to the Culture of the Graſſes.

When the advantages reſulting to the community from the introduction of *Wheat, Barly, Rye, Clover, Tares, St. Foin, Trefoil, &c.* many of which are natives of our own country, daily occur to us: when neither pains nor expence are ſpared to improve our arable lands, it ſeems ſtrange that ſo little care ſhould be taken of the improvement of our meadows and paſtures, which might doubtleſs be made to procure double or treble the crops they already do, by the judicious introduction of proper graſſes.

If

If we examine our meadows, paſtures, and downs, we ſhall find them pretty much in a ſtate of nature, excepting thoſe paſtures which of late years have been ſown with *Rye Graſs* and *Clover*, full of an indiſcriminate mixture of plants, ſome of which afford good, others bad food; ſome good crops, other ſcarce any crops at all. That I may not be thought to ſpeak at random on this matter, I ſhall here mention a few facts to corroborate what I have aſſerted.

My very worthy and much eſteemed friend THOMAS WHITE, Eſq. with a view to the aſcertaining the produce of ſeveral downs and hilly paſtures fed on by ſheep, procured from each of the under-mentioned different downs and commons, in Hampſhire and Suſſex, a turf which, though not larger than about ſix inches in diameter, and choſen as pure as any part of the paſturage, produced, on being planted in a garden, the following plants.

Turf from *Selborn* Common.

1	*Plantago lanceolata.*	Narrow-leaved Plantain.
2	*Agroſtis capillaris.*	Fine panicled Agroſtis.
3	*Avena flaveſcens.*	Yellow Oat Graſs.
4	*Dactylis glomeratus.*	Rough Cocksfoot Graſs.
5	*Feſtuca duriuſcula.*	Hard Feſcue Graſs.
6	*Poa annua.*	Common dwarf Poa.
7	*Cynoſurus criſtatus.*	Creſted Dogs-tail.
8	*Trifolium repens.*	Creeping or Dutch Clover.
9	*Crepis tectorum.*	Smooth Succory Hawkweed.
10	*Achillea Millefolium.*	Yarrow.
11	*Galium verum.*	Yellow Ladies Bedſtraw.
12	*Hypochæris radicata.*	Long-rooted Hawkweed.
13	*Hieracium Piloſella.*	Mouſe-ear Chickweed.
14	*Thymus Serpyllum.*	Wild Thyme.

Turf from *Oakhanger*.

1	*Trifolium repens.*	Creeping or Dutch Clover.
2	*Holcus lanatus.*	Meadow Soft Graſs.
3	*Poa annua.*	Common dwarf Poa.
4	*Agroſtis capillaris.*	Fine panicled Agroſtis.
5	——— *paluſtris.*	Marſh Agroſtis.

Turf from *Deortun*.

1	*Ranunculus repens.*	Creeping Crowfoot.
2	*Lolium perenne.*	Ray Graſs, or perennial Darnel.
3	*Holcus lanatus.*	Meadow ſoft Graſs.
4	*Prunella vulgaris.*	Self-heal.
5	*Feſtuca duriuſcula.*	Hard Feſcue Graſs.
6	*Agroſtis paluſtris.*	Marſh Agroſtis.
7	*Trifolium repens.*	Creeping, or Dutch Clover.
8	*Crepis tectorum.*	Smooth Succory Hawkweed.
9	*Achillea Millefolium.*	Yarrow.

Turf from *Glynd Hill*.

1	*Medicago lupulina.*	Black-ſeeded Medick, Trefoil, or Nonſuch.
2	*Achillea Millefolium.*	Yarrow.
3	*Poa pratenſis.*	Smooth-ſtalk'd Meadow Graſs.

Turf from *Glynd Hill*.

4	*Avena flaveſcens.*	Yellow Oat Graſs.
5	*Feſtuca duriuſcula.*	Hard Feſcue Graſs.
6	——— *ovina.*	Sheeps Feſcue Graſs.
7	*Hieracium Piloſella.*	Mouſe-ear Hawkweed.
8	*Agroſtis capillaris.*	Fine panicled Agroſtis.
9	*Trifolium repens.*	Creeping, or Dutch Clover.
10	*Thymus Serpyllum.*	Wild Thyme.

Turf from *Short Heath*.

1	*Feſtuca bromoides.*	Barren Feſcue Graſs.
2	*Aira præcox.*	Early Aira.
3	*Juncus campeſtris.*	Hairy Ruſh.
4	*Poa annua.*	Common dwarf Poa.
5	*Agroſtis capillaris.*	Fine panicled Agroſtis.

Turf from *Mount Cabron*.

1	*Rumex acetoſa.*	Common Sorrel Dock.
2	*Daucus carota.*	Wild Carrot.
3	*Medicago lupulina.*	Black-ſeeded Medick, Trefoil, or Nonſuch.
4	*Poterium ſanguiſorba.*	Burnet.
5	*Feſtuca duriuſcula.*	Hard Feſcue Graſs.
6	*Avena flaveſcens.*	Yellow Oat Graſs.

Turf from *Ringmer Down*.

1	*Linum catharticum.*	Purging Flax.
2	*Scabioſa columbaria.*	Sheeps Scabious.
3	*Ornithopus perpuſillus*	Bird's-foot.
4	*Avena flaveſcens.*	Yellow Oat Graſs.
5	*Feſtuca duriuſcula.*	Hard Feſcue Graſs.
6	*Trifolium repens.*	Creeping or Dutch Clover.
7	*Hypochæris radicata.*	Long-rooted Hawkweed.
8	*Crepis tectorum.*	Smooth Succory Hawkweed.
9	*Lotus corniculata.*	Bird's-foot Trefoil.
10	*Juncus campeſtris.*	Hairy Ruſh.
11	*Hieracium piloſella.*	Mouſe-ear Hawkweed.
12	*Feſtuca ovina.*	Sheeps Feſcue Graſs.
13	*Thymus Serpyllum.*	Wild Thyme.
14	*Poa pratenſis.*	Smooth-ſtalk'd Meadow Graſs.

Theſe experiments prove, that our downs and commons, which we in general conſider as more free from weeds than moſt of our paſtures, are altogether an aſſemblage of different plants; and our meadows are much the ſame. It muſt be allowed that there is a conſiderable difference in them; one meadow, or tract of land, ſhall naturally contain a greater number of good graſſes than another; another ſhall produce little more than a mixture of unprofitable weeds, ſuch as *Crowfoot*, particularly the creeping ſort, *Docks*, *Sorrel*, *Thiſtles*, *Mallows*, *Yarrow*, *Knapweed*, *Nettles*, *Ragwort*, *&c.* moſt of which having ſtrong perennial or creeping roots, continue in the ground, impoveriſh it, and over-run the few good graſſes there are; ſo that the ground is very little worth. If the ground be manured, the unprofitable and noxious plants are thereby benefited as well as the graſs; for it is the extremity of folly to ſuppoſe that manure ſhall produce good plants if the roots or ſeeds of them were not in the ground before. It muſt be allowed, however, that if there be in the meadow any ſtrong growing graſſes, they may from manure overtop and deſtroy many annual plants, but not thoſe above mentioned, which, with many others, will grow with their growth and ſtrengthen with their ſtrength.

But it is not this kind of weeds alone which, perhaps, are the moſt miſchievous; theſe, being viſible and known to the Farmer, may be deſtroyed; but, at the ſame time, the ground may be over-run with bad graſſes, which, not being ſo eaſily diſtinguiſhed by the Farmer, cannot be ſo readily deſtroyed. Now, graſſes may be conſidered as bad on ſeveral accounts: they may, though good in themſelves, produce ſo ſmall a crop as to be worth little or nothing, as the *early* and *ſilver Hair Graſs* and *Wall Poa:* they may, either from their rankneſs, roughneſs, or ſome other qualities, not perceptible to us, be ſuch as cattle are not fond of, as *Cats-tail Graſs*, *Rough Cocks-foot*, and ſome others: they may die on the ground, and give the meadows a dead and diſagreeable appearance in the winter, as ſome of the ſpecies of *Agroſtis:* or they may blow late in the ſummer, and be not fit for cutting till moſt of the good graſſes are decayed and gone off: and thus a meadow may be filled with noxious plants as effectually as if they were more evidently ſo.

Surely then it muſt be worth the perſon's while, who would wiſh to lay down his land for meadow or paſture, or improve what is already bad, to be at ſome pains and expence about it, and ſow it with as much caution as he would to produce a crop of fine wheat; the more ſo, indeed, as when his land is once filled with good graſſes, it remains a good meadow, or good paſture for ever, which will always look pleaſing, and if properly manured, and the ſeaſon prove not remarkably unfavourable, will each year produce a plentiful crop.

I have already obſerved, in ſpeaking of the *Poa pratenſis*, that a good meadow muſt conſiſt of a variety of graſſes, which ought all to come into bloom nearly at the ſame time; and if the graſſes be of the right kinds, they will begin to blow, and the whole meadow be fit for mowing the laſt week in May. The advantages of this early hay-making are very conſiderable: this part of the year is very often extremely favourable, in point of weather, to the making of hay; it is not poſtponed ſo as to interfere with the harveſt: cattle may be turned the ſooner into the fields to graze, or another crop of hay be produced in good time for the ſecond making.

RANUNCULUS AURICOMUS. WOOD CROWFOOT.

RANUNCULUS *Linnæi Gen. Pl.* POLYANDRIA POLYGYNIA. *Cal.* 5-phyllus. *Petala* 5-infra ungues poro mellifero. *Sem.* nuda.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

RANUNCULUS *auricomus* foliis radicalibus ſubreniformibus, tripartitis, acute crenatis, caulinis digitatis linearibus.

RANUNCULUS *auricomus* foliis radicalibus reniformibus crenatis inciſis, caulinis digitatis linearibus, caule multifloro. *Linnæi Syſt. Vegetab. p.* 429. *Fl. Suecic.* 194.

RANUNCULUS foliis radicalibus integris et ſemitrilobatis rotunde crenatis, caulinis multipartitis linearibus integerrimis. *Haller hiſt. n.* 1177.

RANUNCULUS *auricomus. Scopoli Fl. Carn. n.* 687.

RANUNCULUS nemoroſus vel ſylvaticus folio rotundo. *Bauhin Pin.* 178.

RANUNCULUS *auricomus. Ger. emac.* 954.

RANUNCULUS nemoroſus dulcis ſecundus Tragi. *Parkinſon* 326. *Fuſchii Icon.* 156. *opt. Raii Syn. p.* 248. Sweet Crowfoot or Goldilocks. *Hudſon Fl. Angl. p.* 211.

RADIX perennis, ſubpræmorſa, mitis, ſapore ſubdulci Glycyrrhizæ accedenti, fibris multis capillaribus inſtructa.

ROOT perennial, ſomewhat ſtumped, mild, with a taſte ſomewhat reſembling liquorice, furniſhed with many ſmall fibres.

CAULIS pedalis, erectus, dichotomus aut trichotomus, teres, glaber, baſi purpureus.

STALK about a foot high, upright, dividing into two or three branches, round, ſmooth, and purpliſh at bottom.

FOLIA lævia, radicalia petiolis longis inſidentia, ſubreniformia, mire variantia, integra, tripartita aut etiam quinquepartita, plerumque vero tripartita lobis acute crenatis, caulina inferiora pedata, lobis latis, tripartitis aut quadripartis, dentatis, ſuperiora ſeſſilia, linearia, ſubintegerrima, amplexicaulia.

LEAVES at the bottom of the ſtalk ſmooth, ſitting on long footſtalks, ſomewhat kidney-ſhaped, varying exceedingly, being ſometimes entire, ſometimes divided into three, or even five lobes, but moſt commonly tripartite; the lobes acutely crenated; the leaves towards the bottom divided nearly to the baſe, with three or four ſegments, indented; the uppermoſt leaves ſeſſile, linear, almoſt entire, and embracing the ſtalk.

PETIOLI teretes, pubeſcentes.

FOOT-STALKS of the leaves round and pubeſcent.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, concavis, flaveſcentibus, patentibus, *fig.* 1.

CALYX: a PERIANTHIUM of five leaves, the leaves oval, concave, yellowiſh, and ſpreading, *fig.* 1.

COROLLA: PETALA quinque, ſubrotunda, flava; unguibus parvis, *fig.* 2.

COROLLA: five roundiſh yellow petals, with ſmall ungues or claws, *fig.* 2.

NECTARIUM: fovea ſine ſquamulâ ad baſin petalorum, ſupra ungues.

NECTARY: a depreſſion without any ſcale, at the bottom of the petals above the claws.

STAMINA: FILAMENTA plurima, baſi anguſtiora; ANTHERÆ oblongæ, flavæ, compreſſæ, incurvatæ; duas aut tres vidi connatas, *fig.* 3. 5. auct.

STAMINA: FILAMENTS numerous, narrow at bottom; ANTHERÆ oblong, yellow, flattened, and incurvated. I obſerved two or three growing together, *fig.* 3. 5. magnified.

PISTILLUM: GERMINA numeroſa in capitulum collecta; STIGMATA reflexa, minima, *fig.* 4.

PISTILLUM: GERMINA numerous, collected into a little head; STIGMATA ſmall and reflexed, *fig.* 4.

SEMINA fuſca, compreſſa, apicibus reflexis, *fig.* 6.

SEEDS brown, flat with a reflexed point, *fig.* 6.

Diſtinguiſhed from the other *Crowfoots* by its growing in woods (though I have ſometimes found it in boggy meadows) by its Calyx being nearly as yellow as its petals, and not turning back as in the *bulboſus*; the *Nectary* at the bottom of the petals *a ſmall oblique hole* running downwards, not covered with any ſquamula; the bottom leaves of the plant more entire, and thoſe at the top narrower than in moſt of the other Crowfoots; the footſtalks of the flowers not grooved; the petals often wanting, particularly when cultivated in gardens, or not ſheltered by trees.

It flowers in April and May, and is not particularly diſtinguiſhed for its uſes or beauty.



Ranunculus Auricomus.



Solanum nigrum

SOLANUM NIGRUM. GARDEN NIGHTSHADE.

SOLANUM *Linnæi Gen. Pl.* PENTANDRIA MONOGYNIA.
Cor. rotata. *Antheræ* ſubcoalitæ, apice poro gemino dehiſcentes. *Bacca* bilocularis.

Raii Syn. Gen. 26. HERBÆ BACCIFERÆ.

SOLANUM *nigrum* caule inermi herbaceo, foliis ovatis dentato-angulatis, racemis diſtichis nutantibus. *Linnæi Syſt. Vegetab. p.* 187. *Sp. Pl. p.* 266. *Fl. Suecic. p.* 71. *Haller hiſt. v.* 1. *p.* 249. *n.* 576.
SOLANUM nigrum. *Scopoli Fl. Carniol. p.* 258.
SOLANUM officinarum. *Bauhin Pin. p.* 166.
SOLANUM vulgare. *Parkinſon* 346.
SOLANUM hortenſe. *Ger. emac.* 339. *Raii Syn.* 254. *Hudſon Fl. Angl. p.* 78. *Oeder. Dan.* 460.

Tota planta contuſa tetrum odorem ſpirat.
RADIX annua, ramoſa, albida.
CAULIS pedalis aut bipedalis, ramoſiſſimus, ſubangulosus ex foliis decurrentibus, ſcabriuſculus, ſolidus, ad geniculos paululum incraſſatus, obſcure viridis, ſeu ex viridi purpureus preſertim ad baſin et ad nodos.

RAMI alterni, cauli ſimiles.
FOLIA alterna, longe petiolata, ſubdecurrentia, ovato-acuta, angulosо-dentata, hirſutie molli.

FLORES ſubumbellati; PETIOLUS patens *ex intermedio nodorum.*

CALYX: PERIANTHIUM quinquepartitum, foliolis ovatis, perſiſtentibus, fructibus maturis paululum reflexis, *fig.* 1.
COROLLA monopetala, ſubrotata, alba, laciniis ovato acutis, *fig.* 2.

STAMINA: FILAMENTA quinque breviſſima, villoſa, alba, *fig.* 4. ANTHERÆ oblongæ, flavæ, ſubcoalitæ, biloculares, loculis apice perforatis, *fig.* 5.
PISTILLUM: GERMEN ſubrotundum, viride, *fig.* 6. STYLUS ſubulatus, viridis, parte inferiore villoſa, *fig.* 7. STIGMA ſubrotundum, *fig.* 8.
PERICARPIUM: BACCA rotunda, primum viridis demum nigra, bilocularis, *fig.* 9.
SEMINA plurima, reniformia, flaveſcentia, *fig.* 10.

The whole plant when bruiſed ſmells very diſagreeably.
ROOT annual, branched, and whitiſh.
STALK from one foot to two feet high, very much branched, ſomewhat angular from the leaves running down the ſtalk, roughiſh, ſolid, ſomewhat ſwelled at the joints, of a dirty green, or rather a purpliſh green colour, particularly at bottom and at the joints.
BRANCHES alternate, like the ſtalk.
LEAVES alternate, ſtanding on long footſtalks, ſlightly running down the ſtalk, of an oval pointed ſhape, angularly indented, with a ſoft hairineſs.
FLOWERS growing in a kind of Umbell; FOOTSTALK of the flowers ſpreading, and *ariſing from the middle of the joint.*
CALYX: a PERIANTHIUM divided into five ſegments, which are oval, continuing, and when the fruit is ripe, turning ſomewhat back, *fig.* 1.
COROLLA monopetalous, ſomewhat wheel-ſhaped, of a white colour, the ſegments oval and pointed, *fig.* 2.
STAMINA: five very ſhort white hairy FILAMENTS, *fig.* 4. ANTHERÆ oblong, yellow, ſomewhat united, of two cavities, each having a hole at the top, *fig.* 5.
PISTILLUM: GERMEN roundiſh, and green, *fig.* 6. STYLE tapering, green, the lower part villous; STIGMA roundiſh, *fig.* 8.
SEED-VESSEL: a round berry, firſt green and afterwards black, of two cavities, *fig.* 9.
SEEDS ſeveral, kidney-ſhaped and yellowiſh, *fig.* 10.

In the year 1757, Mr. GATAKER, Surgeon to the Weſtminſter Hoſpital, publiſhed a treatiſe on the internal uſe of *Solanum*, or *Nightſhade*; from an apprehenſion that he had diſcovered a medicine which, under certain regulations, might with perfect ſafety be given; and, as he imagined, with great benefit to mankind in many diſeaſes, where the medical practitioner could do little more than ſympathize with his diſtreſſed patients.

He was induced to make ſome experiments with the *Nightſhades*, from reading an account of a cancerous caſe cured by the infuſion of deadly Nightſhade; but not being able at that particular ſeaſon of the year to procure the deadly Nightſhade, he was obliged to make uſe of the dried leaves of the *Solanum nigrum*, or *Garden Nightſhade*, here figured, which he found to be very powerful in its operation; even ſo ſmall a quantity as one grain weight of the leaf, infuſed in about an ounce of boiling water, would ſometimes produce a very conſiderable effect: but two or three grains ſeldom failed either to vomit, purge, or ſweat the patient moderately, or to increaſe the quantity of urine. It ſometimes occaſioned a head-ach, giddineſs, dimneſs, and drowſineſs; but its moſt common effects were a heat or warmth diffuſed over the whole body a few hours after taking the medicine, a plentiful ſweat ſucceeding this heat, and a gentle purging the next day: if a ſweat did not break out, an extraordinary diſcharge of urine was the conſequence, which was ſometimes followed likewiſe by a purging: one or more of the natural evacuations were almoſt always increaſed. After premiſing this general account of the action of the medicine, he proceeds to enumerate ſeveral caſes in which this medicine appeared to him to be efficacious: the principal of theſe were, two caſes of a cancerous nature;—a large ill-conditioned ſore of long ſtanding in the leg, attended with fever and inflammation;—a violent bruiſe on the loins and hips;—a ſwelling, and ſeveral painful ſores on one leg;—ſeveral ſcrophulous ſores in the thigh and foot;—the body covered with ſcorbutic eruptions;—a malignant corroding ulcer in the back part of the throat;—two caſes of dropſy;—in ſeveral cancerous caſes where it was made uſe of, very little advantage was reaped. In moſt of the above caſes, the *Garden Nightſhade* was made uſe of, between which and the *deadly*, he found, as to their effects, very little difference: he found the medicine to act differently on different conſtitutions; and it was his practice to begin with half a grain of the dried leaf in infuſion, increaſing the doſe according to its effects, and repeating it every ſecond or third night.

He remarks that the *Solanum nigrum* was formerly in uſe for many diſeaſes; yet there were ſome who decried the uſe of it internally; and WEPFER gives an account of three children poiſoned by it: nevertheleſs ſome authors mention it as uſed in food. But, ſurely, if an infuſion of a few grains of this plant be capable of producing ſuch violent effects on the human body, thoſe authors muſt have been miſtaken.

About the ſame time, ſome experiments were alſo made by Mr. BROMFIELD, Surgeon to St. George's and the Lock Hoſpitals; and as the one author ſeems to have written prejudiced in favour of the medicine, ſo the other ſeems to have had his prejudices againſt it; for we find the experiments of the latter differing widely from thoſe of the former. According to Mr. BROMFIELD, the ſymptoms were not only not relieved, but new ones were often brought on, and the patients health rather injured than benefited. In the ſeveral caſes of inflammation, ulcers, &c. where this medicine had been given, it often occaſioned pains in the ſores, nauſea, complaints of the head, temporary loſs of ſight, delirium, violent vomitings, gripings, and purgings, and even death itſelf to one perſon under his own inſpection, though the doſe of the *Garden Nightſhade* did not exceed one grain at a time.

After giving this account, we ſhall leave it to our readers to determine with what propriety it is diſregarded in the preſent practice; and would juſt remark, that from the apparently inconteſtible proofs of its deleterious qualities, perſons cannot be too nice in ſelecting their pot-herbs, particularly thoſe who make a practice of gathering from dunghills and gardens, a ſpecies of *Orach*, by ſome called *Fat-Hen*, by others *Lambs-Quarters*, &c. as there is ſome diſtant ſimilitude betwixt the two plants, and their places of growth are the ſame.

The figure and deſcription above given, will enable any one to diſtinguiſh this plant. It is an annual, flowering in July, and producing its black berries in autumn, which moſt probably are alſo poiſonous. It varies in ſize as well as in the hairineſs of its leaves; and the manner of the flowers growing from the middle of each joint is both ſingular and curious.

TRIFOLIUM FRAGIFERUM. STRAWBERRY TREFOIL.

TRIFOLIUM *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA.

Flores ſubcapitati. *Legumen* vix calyce longior, non dehiſcens, deciduum.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

TRIFOLIUM *fragiferum* ſpicis ſubrotundis, calycibus inflatis bidentatis reflexis, caulibus repentibus. *Linnæi Syſt. Vegetab. p.* 574. *Sp. Pl. p.* 1086. *Fl. Suecic. p.* 26.

TRIFOLIUM caule repente; ſpicis glabris; calycibus ſericeis, ampullaſcentibus. *Haller. hiſt. n.* 370.

TRIFOLIUM fragiferum. *Scopoli Fl. Carniol. n.* 933.

TRIFOLIUM fragiferum friſicum. *Bauhin Pin.* 329.

TRIFOLIUM fragiferum. *Gerard. emac.* 1208.

Raii Syn. 329. Strawberry Trefoil.

Hudſon. Fl. Angl. p. 286.

RADIX perennis, ſimplex, alba, granulis obſita.
CAULES repentes, purpuraſcentes, in longum extenſi, ramoſi, teretes, læves.
STIPULÆ ovato-acuminatæ, reticulatæ.
PEDUNCULI ſolitarii, longi, teretes, læves, erectiuſculi.
CAPITULI floriferi parvi, ſubrotundi, Trifolii repentis æmuli, at minores, et magis purpurei; his ſuccedunt Capituli fructiferi, rotundi, carnei, magnitudine nucis myriſticæ parvæ. Fragariis mentientes.

FOLIA terna, petiolis hirſutulis inſidentia, obovata, lævia, juniora vero leniter hirſuta, acute ſerrata, mucronata, venis ad marginem divaricantibus.

CALYX: INVOLUCRUM polyphyllum, foliolis ſetaceis, PERIANTHIUM tubuloſum, villoſum, ſupra gibboſum, quinquedentatum, dentibus tribus inferioribus æqualibus acuminatis viridibus, duobus ſuperioribus paulo longioribus, ſubulatis, rigidulis, apicibus rufis, *fig.* 2, 3, 4. pars gibboſa calycis demum mire mutatur, augetur, inflatur, reticulata fit, et pericarpium obtegit; dentes vero retinet, *fig.* 8.

COROLLA papilionacea, purpurea; VEXILLUM Alis longior, compreſſum, lineis roſeis pictum; ALÆ breves, minimæ; CARINA Alis brevior, *fig.* 2: unuſquiſque floſculus paleâ concava, ſubulata, ſuffulcitur, *fig.* 1.

STAMINA ut in pleriſque hujus generis; ANTHERÆ flavæ, *fig.* 6.
PISTILLUM: GERMEN ovatum: STYLUS longitudine ſtaminum: STIGMA capitatum, *fig.* 7.
PERICARPIUM: LEGUMEN ovatum, compreſſum, diſpermum aut monoſpermum, calyce inflato obtectum, *fig.* 9, 10.
SEMEN ovato-reniforme, nitidum, *fig.* 11.

ROOT perennial, white, beſet with little grains.
STALKS creeping, purpliſh, extending to a conſiderable length, branched, round, and ſmooth.
STIPULÆ oval, with a long point, and reticulated.
FOOT-STALKS of the flowers, ſingle, long, round, ſmooth, and nearly upright.
HEADS of the flowers ſmall, roundiſh, like thoſe of the Creeping or Dutch Clover, but ſmaller and more purple: to theſe ſucceed the heads containing the fruit, which are round, fleſh coloured, the ſize of a ſmall nutmeg, and very much reſembling Strawberries.
LEAVES growing three together, ſitting on foot-ſtalks, ſlightly hairy, inverſely oval, ſmooth; the younger ones ſometimes hairy, ſharply ſerrated, and terminating in a ſhort point; the veins divaricating at the margin.
CALYX: INVOLUCRUM conſiſting of many ſetaceous folioli or little leaves: PERIANTHIUM tubular, villoſe, gibbous above, having five teeth, the three lowermoſt of which are equal, with long green points, the two uppermoſt a little longer, with tapering rigid reddiſh points, *fig.* 2, 3, 4. the gibbous part of the calyx at length becomes wonderfully changed, increaſed, ſwollen, reticulated, and covers the pericarpium; ſtill however retaining its teeth, *fig.* 8.
COROLLA papilionaceous, and of a purple colour; the VEXILLUM longer than the Alæ, flat and ſtreaked with roſe-coloured lines; the WINGS ſhort and very ſmall; the KEEL ſhorter than the Wings, *fig.* 2: each floſcule is ſupported by a ſmall, tapering, hollow leaf, or palea, *fig.* 1.
STAMINA like moſt of thoſe in this genus: ANTHERÆ yellow, *fig.* 6.
PISTILLUM: GERMEN ovate: STYLE the length of the Stamina: STIGMA forming a little head, *fig.* 7.
SEED-VESSEL: an oval, flattened Legumen, containing one or two ſeeds, and covered over with the inflated calyx, *fig.* 9, 10.
SEEDS of an oval kidney ſhape and ſhining, *fig.* 11.

The beautiful ſtrawberry-like appearance of the capituli or little heads, containing the ſeed of this plant, and which ariſe from a very peculiar circumſtance, the inflation or enlargement of the calyx after the bloſſom is over, in a very ſtriking manner diſtinguiſhes this ſpecies from the *Trifolium repens*, to which in its general habit it is very nearly allied. It differs from the *repens* alſo in ſeveral other reſpects; the whole plant is ſmaller; the bloſſoms are of a more purple hue; its place of growth is alſo ſomewhat different: the *repens* ſeems to delight in a dry gravelly ſoil; the *fragiferum*, on the contrary, moſt uſually occurs in a moiſt ſituation, nor is it ſo common a plant as the *repens*, yet it abounds in many places about *London*. I have obſerved it plentifully in the lanes about *Hornſey*, alſo near *Pancras*, and in many other parts. It flowers and produces its ſeeds in Auguſt.

It may with great eaſe be cultivated in a garden, if it ſhould be thought worthy a place there.

HALLER quotes an Author*, who ſays, they have begun to cultivate it in Ireland for Cattle, and that when ſown, it has grown to the length of ſeven feet: without controverting this fact, which borders a little on the incredible, we would obſerve, that the *Dutch Clover* is certainly a much ſtronger plant, and to be preferred in a dry ſituation: in moiſt ſituations, there are many of the graſſes which may be cultivated to far greater advantage, as neither of theſe Trefoils produce much of a crop till late in the ſummer.

* BAKER Experim. p. 98.

Trifolium Hybridum





Agaricus fimetarius

AGARICUS FIMETARIUS. EGG MUSHROOM.

AGARICUS *Linnæi Gen. Pl.* CRYPTOGAMIA FUNGI.

FUNGUS horizontalis ſubtus lamelloſus.

Raii Syn. Gen. 1. FUNGI.

AGARICUS *fimetarius* ſtipitatus, pileo campanulato lacero, lamellis nigris lateraliter flexuoſis, ſtipite fiſtuloſo. *Lin. Syſt. Vegetab. p.* 820. *Spec. Pl. p.* 1643. *Fl. Suecic. n.* 1215.

AMANITA albus, campanulatus, ſquamoſus, nigreſcens. *Haller. hiſt. helv. p.* 157. *n.** 2357.

AGARICUS *fimetarius. Scopoli Fl. Carniol. n.* 1484.

AGARICUS pileo campanulato, contracto, ſtriato et villoſo, lamellis tenuiſſimis; petiolo cylindraceo, annulo fugaci, diſtincto, vel nullo. GLEDITCH. *Fung. p.* 122.

FUNGUS albus ovum referens. *Buxbaum. Cent.* 4. *t.* 27. *fig.* 1. *Raii Syn. p.* 5. *n.* 22. *Hudſon Fl. Angl. p.* 493. *Lightfoot Fl. Scot. p.* 1021. *Schæffer tab.* 7. 8. 46. 47. 100.

Gregatim plerumque naſcuntur hi Fungi, ſubinde vero ſolitarii inveniuntur.

STIPES primum pileo penitus obtegitur, mox ſemipedalis, evadit, cylindricus, fiſtuloſus, albiſſimus, *medullâ filiformi, intra tubum liberâ.*

VOLVA nulla, ſed margo inſtar volvæ ex margine pilei lacero ſtipitem cingens infra laminas.

PILEUS albus, in junioribus *oblongus*, digitalis, mox ſubcampanulatus, demum fere planus; CARO tenuis, CUTIS *in ſquamas fuſcas laciniatas ſurſum revolutas ſeparans*, quæ cœlo intempeſtivo pluviis ſæpe abluuntur, pileo decorticato albo relicto.

LAMELLÆ numeroſæ, lineas tres latæ, primum albiſſimæ, farinâ quaſi adſperſæ, in adultis laxæ, *flexuoſæ* cum ruboris tincturâ, demum nigricantes, in liquorem atramentoſum diffluentes.

Theſe Muſhrooms moſt commonly riſe out of the ground in cluſters, ſometimes they grow ſingly.

STALK at firſt is wholly covered by the Pileus or Cap, but ſoon grows to the height of ſix inches, is cylindrical, hollow, and very white, *the pith within the tube is ſhaped like a thread and looſe.*

RING proper, none, but a ſlight edging like a ring from the torn edge of the cap ſurrounds the ſtalk below the gills.

CAP white, in the young ones *oblong*, the length of the finger, preſently becoming ſomewhat bell-ſhaped, finally almoſt flat; the FLESH thin; the SKIN *ſeparating into brown flakes which curl upwards*, and which in ſhowery weather are often waſhed off by the rains, leaving the Cap naked and white.

GILLS numerous, three lines broad, at firſt exceedingly white and covered as it were with powder, when full grown they are looſely connected and *waved*, with a tinge of red, finally they become black and diſſolve into an inky liquor.

The FUNGI, generally known in Engliſh by the names of *Muſhrooms* and *Toad-ſtools*, are a tribe of plants, which, while they have afforded abundant matter of curious inquiry to the philoſophic naturaliſt, have hitherto eluded the moſt unwearied attempts of the Botaniſt to reduce them to their ſeveral ſpecies and varieties.

Although, in point of utility to mankind, they may not compare with many other families of plants, yet are they by no means without their importance in the general œconomy of nature. Whatever is not immediately applicable to our own wants, we are apt to think too lightly of; forgetting, that the infinitely more numerous inhabitants of this terraqueous globe, are equally the objects of the care of an all-bountiful Creator.

A great variety of Inſects feed on the different ſpecies of Fungi, particularly the *larvæ* or *maggots* of many of the fly kind. *Muſcæ Linn.*

In ſome countries, Muſhrooms are made much more an object of food than with us; this prompts the inhabitants often to eat ſuch as are in their natures poiſonous, whence direful effects have too often proceeded. With us they are uſed more as an article of luxury, and the markets being chiefly ſupplied by the cultivators of them, who propagate one particular ſpecies, theſe fatal accidents ſcarcely ever happen here.

To prevent, however, any accidents of this kind, perhaps the beſt advice would be to caution perſons in general, to meddle with no other ſort than the common field Muſhroom, which is generally cultivated; and rather to procure ſuch of thoſe who cultivate them, than of thoſe who may occaſionally offer them to ſale: and to render a knowledge of this ſpecies more obvious, we propoſe, in a future number, to give a figure of it in all its ſtates, and ſhall endeavour to diſtinguiſh it from the others in the plaineſt manner.

From the obſervations already made on this Genus, we are led to think, that the ſeveral ſpecies of them are more diſtinct, and leſs liable to thoſe amazing alterations, which Botaniſts inform us of, and which indeed are ſufficient to intimidate the ſtudent, and deter him from entering on a field, where he is to expect nothing but confuſion, and be loſt in the perplexing mazes of endleſs varieties. There is one pleaſing circumſtance attends the *Fungi*, they make their principal appearance in autumn, at a time of the year when the Botaniſt is moſt at leiſure to obſerve them, and when ſcarcely any other plants engage his attention. Next ſucceed the wintry Moſſes: and thus the Botaniſt's perpetual ſummer is rendered complete.

The ſpecies here figured is not eaten with us; yet there appears no reaſon to ſuſpect its being in any degree poiſonous.

It occurs very frequently, towards the end of September, by the ſides of roads, growing out of the ground, probably where there has been ſome dung intermixed.

It is diſtinguiſhed from the other *Fungi* by its oblong oval ſhape, and, in a more particular manner, *by the raggedneſs of its outer coat, which curls up in flakes*, but it is apt to be waſhed off in heavy rains. The gills are large, numerous, and *waved*, at firſt of a reddiſh purple colour, and often white, finally diſſolving into a black liquid, like many others of the ſame kind.

PLANTAGO MAJOR. COMMON PLANTAIN.

PLANTAGO *Linnæi Gen. Pl.* TETRANDRIA MONOGYNIA.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.

PLANTAGO *major* foliis ovatis glabris, ſcapo tereti, ſpica floſculis imbricatis. *Lin. Syſt. Vegetab. p.* 131. *Spec. Plant. p.* 163. *Fl. Suecic. n.* 129.

PLANTAGO foliis petiolatis, ovatis, glabris; ſpica cylindrica. *Haller hiſt. Helv. n.* 660.

PLANTAGO *major. Scopoli Fl. Carniol. n.* 161.

PLANTAGO latifolia ſinuata. *Bauhin Pin.* 189.

PLANTAGO latifolia. *Ger. emac.* 419.

PLANTAGO latifolia vulgaris. *Parkinſon* 493. *Raii Syn.* 314. Great Plantain, or Waybread. *Hudſon Fl. Angl. p.* 51. *Oeder. Fl. Dan. ic.* 461. *Lightfoot Fl. Scot. p.* 117.

RADIX vetuſta pollicaris, præmorſa, plurimis fibris albidis alte demiſſis, terram firmiter apprehendens.

ROOT when old the thickneſs of one's thumb, ſtumped, laying ſtrong hold of the earth by its fibres, which ſtrike deeply into it, and are of a whitiſh colour.

FOLIA petiolata, ovata, ſeptemnervia, glabra, juniora vero hirſutula, palmaria, margine minutim remoteque dentata.

LEAVES ſtanding on footſtalks, oval, having ſeven ribs, ſmooth, but ſomewhat hairy when young, about four fingers in length, the edge minutely and remotely indented.

PETIOLI longi, ſubtus convexi, ſupra concavi, baſi ſubvaginati.

FOOT-STALKS of the leaves long, convex on the under ſide, concave above, each forming a kind of ſheath at its baſe.

SCAPI teretes, erecti, pubeſcentes, foliis longiores.

FLOWER-STALKS round, upright, pubeſcent, and longer than the leaves.

SPICÆ cylindricæ, longæ, floribus undique imbricatæ.

SPIKES cylindrical, long, ſurrounded on every ſide with flowers lying one over another.

BRACTEA lanceolata, concava, ſub ſingulo floſculo, *fig.* 1.

BRACTEA lanceolate, and hollow, under each flower, *fig.* 1.

CALYX: PERIANTHIUM tetraphyllum, foliolis ovatis, concavis, obtuſis, lævibus, ſubæqualibus, perſiſtentibus, *fig.* 2.

CALYX: a PERIANTHIUM of four leaves, which are oval, concave, obtuſe, ſmooth, nearly equal and continuing, *fig.* 2.

COROLLA monopetala, perſiſtens, marceſcens; TUBUS cylindrico-globoſus, brevis, *laciniis* ovato-acutis, reflexis, *fig.* 3.

COROLLA monopetalous, continuing of a withered appearance; TUBE of a cylindrical globular form, and ſhort; the SEGMENTS oval, pointed, and turned back, *fig.* 3.

STAMINA: FILAMENTA quatuor, capillaria, patentia, corollâ multo longiora; ANTHERÆ purpureæ, biloculares, ſingulo loculo baſi mucrone terminato, *fig.* 4.

STAMINA: FILAMENTS four, very ſmall, ſpreading, much longer than the corolla; ANTHERÆ purple, bilocular, each cell terminating at bottom in a point, *fig.* 4.

PISTILLUM: GERMEN ovatum; STYLUS filiformis, ſtaminibus brevior, villoſus; STIGMA ſimplex, *fig.* 5, 6.

PISTILLUM: GERMEN oval; STYLE filiform, ſhorter than the ſtamina, villous; STIGMA ſimple, *fig.* 5, 6.

PERICARPIUM: CAPSULA ovata, circumſciſſa, fuſca, continens SEMINA circiter 20 inæqualia, fuſca, *fig.* 7, 8, 9, 10.

SEED-VESSEL: an oval CAPSULE, dividing horizontally in the middle, and containing about 20 unequal brown SEEDS, *fig.* 7, 8, 9, 10.

This ſpecies of *Plantain* grows plentifully in meadows, gardens, and by the ſides of paths, and ſeems to flouriſh moſt in places moderately trodden on, whence perhaps its name of *Waybread.*

In rich ground, the leaves often grow to an enormous ſize; and, in gardens, we often find cultivated, a very ſingular and monſtrous variety of this plant, the *Plantago Roſea* of ſome botaniſts, or Roſe Plantain of the Gardeners, in which the flowers appear to be converted into leaves, which ſpread open ſomewhat like a roſe.

Cattle in general appear very readily to eat the leaves, and the ſeeds are well known to afford food to many of the ſmall birds.

It uſed to be held in conſiderable eſteem as a medicine of the vulnerary kind; in the preſent practice, the diſtilled water is ſometimes made uſe of, and chiefly in ulcerations of the mouth and throat. By the common people, the leaves are often applied to freſh wounds and burns.

It differs remarkably in the number of its ſeeds from the *Plantago Lanceolata*, in which we conſtantly find two large ſeeds; but in this I have moſt commonly found about twenty ſmall ones: yet, what is very extraordinary, RAY and SCOPOLI mention its having only two.



Plantago major



Chenopodium album

CHENOPODIUM ALBUM. WHITE GOOSEFOOT.

CHENOPODIUM *Lin. Gen. Pl.* PENTANDRIA DIGYNIA.

Cal. 5-phyllus, 5-gonus.

Cor. o. *Sem.* 1, lenticulare, ſuperum.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

CHENOPODIUM *album* foliis rhomboideo-triangularibus eroſis poſtice integris, ſummis oblongis, racemis erectis. *Lin. Syſt. Vegetab. p.* 216. *Spec. Plant. p.* 319. *Fl. Suecic. p.* 79.

CHENOPODIUM foliis ſubtus farinoſis, rhomboideis, dentatis, ſuperioribus integerrimis. *Haller hiſt. n.* 1579.

CHENOPODIUM ſylveſtre opuli folio. *Vaillant, Paris* 36. *t.* 7. *fig.* 1.

BLITUM Atriplex ſylveſtris dictum. *Raii Syn. p.* 154. Common wild Orache.

ATRIPLEX folio ſinuato candicante. *Bauh. Pin.* 119.

ATRIPLEX ſylveſtris vulgatior ſinuata major. *Parkinſon*, 748.

ATRIPLEX vulgaris. *Ger. emac.* 326. *Hudſon Fl. Angl. p.* 91. *Lightfoot Fl. Scot. p.* 148.

RADIX annua, fibroſa, alba.

CAULIS erectus, pedalis ad tripedalem, parum flexuoſus, ſubanguloſus et ſtriatus, ſolidus, ramoſus, lævis, ſubinde purpuraſcens. RAMI alterni.

FOLIA rhomboideo-triangularia, eroſa, poſtice integra, *fig.* 7. glauco-viridia, ſubtus præſertim farinâ copioſe adſperſa, ſummis oblongis minus profunde dentatis, aut etiam integris.

RACEMI axillares, erecti, ſpicati, floribus glomeratim diſpoſitis.

CALYX: PERIANTHIUM pentaphyllum, perſiſtens, foliolis ovatis, concavis, margine membranaceis, pulverulentis, *fig.* 1. poſtice viſum, auct.

COROLLA nulla.

STAMINA: FILAMENTA quinque, ſubulata, alba, calycis foliis oppoſita et paulo longiora; ANTHERÆ ſubrotundæ, didymæ, flavæ, *fig.* 2.

PISTILLUM: GERMEN orbiculatum, *fig.* 3. STYLUS brevis, bipartitus; STIGMATA obtuſa, *fig.* 4.

SEMEN unicum, lenticulare, læve, caſtaneum, *fig.* 6.

ROOT annual, fibrous, and white.

STALK upright, from one to three feet high, ſlightly crooked, ſomewhat angular and ſtriated, ſolid, branched, ſmooth, ſometimes of a purpliſh colour. BRANCHES alternate.

LEAVES of a triangular rhomboid figure, deeply and irregularly indented, entire behind, *fig.* 7. of a blueiſh green colour, plentifully covered, particularly on the under ſide, with a mealy powder, the uppermoſt leaves oblong, leſs deeply indented or even entire.

RACEMI axillary, upright, forming a ſpike of flowers growing in little balls or cluſters.

CALYX: a PERIANTHIUM of five leaves: and continuing, the ſegments oval, hollow, membranous at the edges and powdery, *fig.* 1. ſeen on the back part, and magnified.

COROLLA wanting.

STAMINA: five white tapering FILAMENTS oppoſite to and a little longer than the leaves of the calyx; ANTHERA compoſed of two roundiſh yellow cells, *fig.* 2.

PISTILLUM: GERMEN orbicular, *fig.* 3. STYLE ſhort, divided in two; STIGMATA obtuſe, *fig.* 4.

SEED one, lens-ſhaped, ſmooth, and of a cheſnut colour, *fig.* 6.

If any plants ſtand in need of figures to illuſtrate them, rather than deſcriptions, it is ſurely the different ſpecies of *Chenopodium* and *Atriplex*.

By figuring the outline of the leaf of any of theſe plants, we convey to the moſt tranſient obſerver, a perfect idea of its ſhape, without that ambiguity which muſt ever attend the deſcription of leaves ſo irregularly formed, ſo variable, and ſo difficult of definition.

Beſides figures, theſe plants ſeem alſo to require every other kind of elucidation; and if the altering and fixing diſtinct Engliſh names to different genera be in any caſe juſtifiable, it muſt be here, where three different genera are called indiſcriminately by the names of *Orach*, *Gooſefoot*, and *Blite*. I have therefore preſumed to call the genus CHENOPODIUM *Gooſefoot*, and propoſe confining the term *Orach* to ATRIPLEX, and *Amaranth* to AMARANTHUS; the term *Blite*, by which a ſpecies of the laſt-mentioned genus has been called, ſeems moſt applicable to the genus BLITUM.

The *Chenopodium album* is the moſt common with us of the whole genus; it occurs in every garden, flouriſhes on every dunghill, and abounds in moſt of our corn fields. To the gardener it is a quick-growing troubleſome weed; to the farmer it is an injurious one, and generally introduced into his fields by that ſlovenly practice of ſuffering every kind of weed to ſeed on his dung-heap.

Like the other ſpecies of this genus, it varies exceedingly in its appearance when young, and when in its ſeeding ſtate. Indeed all theſe plants require that the ſtudent ſhould notice them from the earlieſt to the lateſt periods of their growth; or he never can attain a perfect knowledge of them.

It is whiter in its whole appearance than moſt of the *Chenopodiums*, the leaves being more generally covered with thoſe pellucid particles reſembling meal, which are characteriſtic of theſe genera.

Mr. LIGHTFOOT noticed its being eaten as a pot-herb in ſome parts of *Scotland*.

ALOPECURUS MYOSUROIDES. FIELD FOXTAIL GRASS.

ALOPECURUS *Linnæi Gen. Pl.* TRIANDRIA. DIGYNIA.

Cal. 2-valvis. *Cor.* 1-valvis.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

ALOPECURUS *myoſuroides* ſpica cylindrica longiſſima, glumis glabris ; culmo ſuberecto. *Hudſon Fl. Angl. p.* 23.

ALOPECURUS *Agreſtis* culmo ſpicato erecto, glumis lævibus. *Lin. Syſt. Vegetab. p.* 93. *Sp. Pl. p.* 89.

ALOPECURUS culmo erecto, ſpicato, calyce ciliato. *Haller hiſt. helv. p.* 249.

GRAMEN Typhoides ſpica anguſtiore. *Bauhin Pin.* 4.

GRAMEN cum cauda muris purpuraſcente. *I. Bauhin.* 2. *p.* 473.

GRAMEN ſpicatum, ſpica cylindracea tenuiſſima longiore. *Scheuch. Gram.* 69.

GRAMEN *myoſuroides* majus, ſpica longiore, ariſtis rectis. *Raii Syn. p.* 397. The greater Mouſe-tail Graſs.

GRAMEN alopecuroides ſpica longa majus et minus. *Parkinſon* 1169.

GRAMEN alopecuroides minus. *Gerard emac.* 10. *Lightfoot Fl. Scot. p.* 91. *Schreber. Gram.* 140. *t.* 19. *fig.* 2.

RADIX annua, fibroſa, fuſca.

CULMUS pedalis, erectus, baſi ſæpe infractus, rigidiuſculus, teres, geniculatus.

FOLIA triuncialia, ad duas lineas lata, lævia, ſtriata, baſi membranâ obtuſâ inſtructa.

SPICA longa, tenuis, ſubcylindracea, purpuraſcens.

SPICULÆ unifloræ, ovato-acutæ, in ſpicam imbricatim congeſtæ, externe convexulæ, interne planæ, *fig.* 1.

CALYX: GLUMA bivalvis, uniflora ; valvulæ ſubæquales, muticæ, nervoſæ, *baſi annulo cinctæ, fig.* 2, 3.

COROLLA univalvis, valvulâ calyce paulo longiore, membranaceâ, lævi, *fig.* 4, Ariſtâ recta, e baſi valvulæ exſerta, ſpiculâ duplo fere longiore inſtructa, *fig.* 5.

STAMINA: FILAMENTA tria, capillaria, erecta, valvulis calycinis duplo longiora: ANTHERÆ oblongæ, utrinque furcatæ, *fig.* 6.

PISTILLUM: GERMEN minimum, *fig.* 7 : STYLUS brevis, baſi tumidus, *fig.* 8 : STIGMATA duo, ſetacea villoſa apice reflexa, *fig.* 9.

SEMEN unicum, minimum, ſubrotundum, corolla et calyce obveſtitum, *fig.* 10.

ROOT annual, fibrous, and brown.

STALK a foot high, upright, often crooked at bottom, ſtiffiſh, round, and jointed ; the joints ſmooth and purple.

LEAVES about three inches long and two lines broad, ſmooth, ſtriated, furniſhed at bottom with an obtuſe membrane.

SPIKE long, ſlender, ſomewhat cylindrical, and purpliſh.

SPICULÆ uniflorous, of a pointed oval ſhape, lying cloſely one over another in a ſpike, externally roundiſh, internally flat, *fig.* 1.

CALYX: a GLUME of two valves, containing one flower ; the valves nearly equal, not terminated by any ſhort Ariſta, ſtrongly rib'd, and *ſurrounded at bottom by a ring, fig.* 2, 3.

COROLLA of one valve, the valve a little longer than the calyx, membranous, and ſmooth, *fig.* 4, furniſhed with a ſtraight Ariſta, which proceeds from the baſe of the valve, and is nearly twice the length of the ſpicula, *fig.* 5.

STAMINA: three FILAMENTS, very fine, upright, twice the length of the valves of the calyx: ANTHERÆ oblong, and forked at each end, *fig.* 6.

PISTILLUM: GERMEN very ſmall, *fig.* 7 : STYLE ſhort, ſwelled at bottom, *fig.* 8 : STIGMATA two, tapering, villous, bent back at top, *fig.* 9.

SEED one, very minute, encloſed by the corolla and calyx, *fig.* 10.

The *Field Foxtail Graſs*, with reſpect to agriculture, may be conſidered rather as a weed than as an uſeful paſture graſs.

It is very common in cultivated ground ; and often abounds ſo much in corn fields, as to be prejudicial ; among rubbiſh, and on banks by the ſides of fields, it is alſo frequently found ; but ſcarce ever in meadows.

It flowers early, and continues to bloſſom till Autumn ; and comes into bloom the quickeſt, after being ſown, of any graſs that I have hitherto noticed.

It is diſtinguiſhed from the other ſpecies of the ſame genus, by its long ſlender ſpike, which tapers to a point, and has ſome reſemblance to a mouſes tail, whence J. BAUHINE's and Mr. HUDSON's names. This ſpike is generally of a purpliſh colour, at leaſt on that ſide which is moſt expoſed to the ſun ; though ſometimes the whole ſpike appears of a whitiſh colour. The form of the ſpike, and its place of growth, will, in general, point out this ſpecies plainly enough. But if theſe ſhould be found deficient, the ſtudent may have recourſe to the annulus or ring, which ſurrounds the baſe of each ſpicula, *vid. fig.* 3.

I have found this ſpecies effected with the diſeaſe called *Ergot*, deſcribed under the *Flote Feſcue Graſs*.



Alopecurus myosuroides

N.º 102



Polytrichum subrotundum

Sansom Sculp.

POLYTRICHUM SUBROTUNDUM. DWARF POLYTRICHUM.

POLYTRICHUM *Linnæi.* CRYPTOGAMIA MUSCI.
Calyptra duplex, interior membranacea, lævis, exterior floccida.
Raii Syn. Gen. 3. MUSCI.
POLYTRICHUM *ſubrotundum* caule ſimplici antherâ ſubrotunda. *Hudſon Fl. Angl. p.* 400.
MNIUM *Polytrichoides* calyptra villoſa. *Lin. Syſt. Vegetab. p.* 796. *Sp. Pl. p.* 1576. *Fl. Suecic. p.* 385.
MNIUM calyptra villoſa, acaulon, foliis ſerratis, capſulis cylindricis erectis. *Haller. hiſt. n.* 1837.
POLYTRICHUM *Aloefolium. Scopoli Fl. Carniol. p.* 309. *n.* 1290.
POLYTRICHUM nanum, capſulis ſubrotundis galeritis, aloës folio non ſerrato. The dwarf round-headed Aloe-leaved Polytrichum, *Dillen. Muſc.* 428. *t.* 55. *f.* 6.
POLYTRICHUM *nanum* capſula cylindrica erecta; ſurculis ſimplicibus, breviſſimis, foliis ſerrulatis. *Weis Plant. Cryptogam. p.* 173.
MUSCUS capillaceus minor, calyptra tomentoſa. *Vaill. paris.* 131. *t.* 26. *f.* 15.
ADIANTUM aureum medium, in ericetis proveniens. *Vaill. paris.* 429. *t.* 55. *f.* 7.
MUSCUS coronatus rigidus minor et humilior capitulis villoſis brevioribus. *Moris. hiſt.* 3. *p.* 630. *t.* 7. *f.* 7.
POLYTRICHUM minus capſulis ſubrotundis, calyptra quaſi lacera coronatis. *C. G.* 221. *Raii Syn. p.* 91.

RADIX tomentoſa.
CAULIS breviſſimus, vix ullus.
FOLIA brevia, rigida, intus concava, extus convexa, acuta, margine minutiſſime ſerratâ, baſi lato membranaceo caulem amplectente, ſiccata incurvata teretiuſcula, *fig.* 1.

PEDUNCULI ſimplices, unciales, rubicundi, ſubdiaphani, flexuoſi, *fig.* 3, demum tortuoſi, *fig.* 21.

CAPSULÆ ſubrotundæ, *fig.* 4.
Fig. —— 2, Folia per lentem viſa.
5, Calyptra exterior magn. nat.
6, Eadem magn. auct.
7, Eadem inverſa ut Calyptra interior appareat.
9, 9, Calyptra interior in ſitu naturali.
10, 10, Eadem auct.
11, Calyptra interior ſeparata ab exteriore et ſeorſim exhibita.
12, Eadem in ſitu naturali cum exteriore connexa.
13, Capſula magn. nat. nuda.
14, Eadem auct.
15, Eadem ad maturitatem magis accedens.
16, Operculum.
17, 17, Ciliæ.
18, 18, 18, Membrana mucronata in ſummo capſulæ cui adnectuntur ciliæ.
19, 19, Ciliæ in ſectione longitudinali Capſulæ exhibitæ.
20, Receptaculum ſeminis.

ROOT woolly.
STALK very ſhort, ſcarce any.
LEAVES ſhort, rigid, hollow within, round without, ſharply pointed, the edge very finely ſerrated, embracing the ſtalk by a broad membranous baſe; when dried bending inwards, and of a roundiſh form, *fig.* 1.
FOOT-STALKS ſimple, an inch high, reddiſh, ſomewhat tranſparent, crooked, *fig.* 3, finally twiſted, *fig.* 21.
CAPSULES roundiſh, *fig.* 4.
Fig. —— 2, The leaves viewed through a magnifier.
5, The exterior Calyptra of its natural ſize.
6, The ſame magnified.
7, The ſame inverted, that the inner Calyptra may appear.
9, 9, The inner Calyptra in its nat. ſituation.
10, 10, The ſame enlarged.
11, The inner Calyptra ſeparated from the outer one, and ſhewn by itſelf.
12, The ſame in its natural ſituation, connected with the outer one.
13, The Capſule of its nat. ſize uncovered.
14, The ſame enlarged.
15, The ſame approaching more to maturity.
16, The Cover.
17, 17, The Ciliæ.
18, 18, 18, A pointed Membrane at the ſummit of the Capſule, to which the Ciliæ are connected.
19, 19, The Ciliæ ſhewn in a longitudinal ſection of the Capſule.
20, The Receptacle to which the ſeeds are connected.

About two years ago (1776) on examining the ſtructure of the *Polytrichum commune*, in a very young ſtate, I found one of the heads (*Antheræ Linn.*) after I had diveſted it of its woolly Calyptra, covered with a membranous ſhining ſubſtance, and which I had no ſooner ſeen, than I judged it to be a Calyptra, being ſo very ſimilar to the Calyptra's of ſome Moſſes I had juſt before been examining; and on a more minute inveſtigation, I found it to be a real Calyptra, not accidental to the plant then under examination, but occurring in all thoſe which I, at that time, had an opportunity of diſſecting; and afterwards found to be in the dwarf variety of the ſame ſpecies, growing on heaths, and in the preſent plant.

Thoſe who ſhall take the pains of inveſtigating the ſtructure of theſe Moſſes, will think it ſtrange that a part ſo very obvious to the naked eye, ſhould not have been noticed before; but this is eaſily accounted for.

No one, when he ſits down to examine theſe Moſſes, conceives a priori, that they have any more than one Calyptra; finding that which is peculiar to this Genus, he reſts ſatisfied, pulls it off, and proceeds to the examination of the remaining parts, not imagining that a membranous Calyptra is cloſely connected by its apex to the woolly one, pulled off with, and covered by it, and ſcarce diſcovered but by totally inverting it: but that this is actually the caſe, any one may ſatisfy themſelves in the courſe of this and the ſucceeding months, *February* and *March*.

This inner Calyptra differs very little from the Calyptra of other Moſſes; at firſt it wholly ſurrounds the unripe Capſules; as they increaſe in ſize, it ſplits at bottom, and finally becomes very ſhort.

I was the more pleaſed with this diſcovery, as I conceived hopes it would place the genus *Polytrichum* in a more pleaſing and ſatisfactory point of view; and I have accordingly ventured to alter its generic character as above: by this alteration it is brought from the *Mniums*, among which it is placed by LINNÆUS and HALLER, and arranged with the *Polytrichums* of DILLENIUS, HUDSON, SCOPOLI, and WEIS, to which its habit alone certainly entitles it, was it not found to accord with the *Polytrichum* in the eſſential character now diſcovered.

Why nature ſhould have been thus careful in covering this genus of plants with a warm additional coat, while many of the other Moſſes, at the ſame time of the year, are thinly clad with a ſingle membranous veil, does not appear. In the ſtructure of the two Calyptra's, there is a moſt eſſential difference; the outer one being a woolly ſubſtance cloſely matted together, without any connecting membranous ſubſtance; the inner one conſiſting wholly of membrane.

The plant here figured, is the *Polytrichum capſulis ſubrotundis* of DILLENIUS, and of which that, with the *capitulis oblongis*, ſeems to be only a variety growing in warmer and leſs expoſed ſituations.

It is by no means an uncommon Moſs on our heaths, and expoſed hilly and ſandy places about town. It throws out its ſtalks in *November* and *December*, and ripens its Capſules in *January* and *February*.

RANUNCULUS SCELERATUS. CELERY-LEAVED CROWFOOT.

RANUNCULUS *Lin. Gen. Pl.* POLYANDRIA POLYGYNIA.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

RANUNCULUS *ſceleratus* foliis inferioribus palmatis; ſummis digitatis, fructibus oblongis. *Lin. Syſt. Vegetab. p.* 429. *Sp. Pl. p.* 776. *Fl. Suecic. p.* 194. *n.* 499.

RANUNCULUS foliis levibus, ſemitrilobatis, rotunde ſerratis, fructu ovato. *Haller hiſt. p.* 74. *n.* 1175.

RANUNCULUS *ſceleratus. Scopoli Fl. Carniol. n.* 688.

RANUNCULUS paluſtris apii folio lævis. *Bauhin. pin.* 180.

RANUNCULUS paluſtris rotundifolius. *Ger. emac.* 962.

RANUNCULUS paluſtris ſardonia lævis. *Parkinſon* 1215. *Raii Syn. p.* 249. Round-leaved Water Crowfoot.

Hudſon Fl. Angl. p. 212.

Oeder Dan. icon. 570.

Lightfoot Fl. Scot. p. 291. Celery-leaved Crowfoot.

RADIX annua, fibroſiſſima, fibris albidis.

CAULIS erectus, pedalis ad bipedalem, inſigniter craſſus, fiſtuloſus, lævis, ramoſus.

FOLIA radicalia longe petiolata, nitida, ſubcarnoſa, trilobata, lobis trifidis rotunde crenatis; caulina ſubſeſſilia, palmata; ſuprema elliptica.

FLORES exigui, flavi.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, concavis, flaveſcentibus, deciduis, *fig.* 1.

COROLLA: PETALA quinque, parva, ovata, flava, nitida, magnitudine calycis, decidua, *fig.* 2.

NECTARIUM: Fovea marginata, ad baſin cujuſvis petali, *fig.* 3.

STAMINA: FILAMENTA plurima, raro ultra viginti, baſi tenuiora: ANTHERÆ flavæ, compreſſæ, biloculares, *fig.* 5.

PISTILLUM: GERMINA numeroſa, in capitulum oblongum, collecta: STIGMATA minima, germinibus inſidentia.

SEMINA plurima, compreſſa, ovato-acuminata, parva, receptaculo oblongo affixa, *fig.* 6.

ROOT annual, exceedingly fibrous, the fibres whitiſh.

STALK upright, from one to two feet high, remarkably thick, hollow, ſmooth, and branched.

LEAVES: radical leaves ſitting on long foot-ſtalks, ſhining, ſomewhat fleſhy, divided into three lobes; the lobes trifid, and roundly notched; ſtalk-leaves nearly ſeſſile, and palmated; uppermoſt leaves elliptical.

FLOWERS ſmall and yellow.

CALYX: a PERIANTHIUM of five leaves, the leaves oval, hollow, yellowiſh, and deciduous, *fig.* 1.

COROLLA: five ſmall, oval, yellow, ſhining PETALS, the ſize of the Calyx, and deciduous, *fig.* 2.

NECTARY: a depreſſion or pore at the baſe of each Petal, ſurrounded by a prominent margin, *fig.* 3.

STAMINA: FILAMENTS numerous, ſeldom more than twenty, ſlender at bottom: ANTHERÆ yellow, flat, and bilocular, *fig.* 5.

PISTILLUM: GERMINA numerous, collected together into an oblong head: STIGMATA very minute, ſitting on the Germina.

SEEDS numerous, flat, oval, and pointed, ſmall, affixed to an oblong receptacle, *fig.* 6.

This ſpecies is diſtinguiſhed from the other *Crowfoots*, by its growing in or near the water, by its broad ſhining bottom leaves, thick ſtalk, ſmall yellow flowers, and ſmooth oblong ſeed-heads.

The leaves and flowers poſſeſs a conſiderable degree of acrimony, ſo as even to bliſter the ſkin, if applied to it: chewed in the mouth, they inflame and chop the tongue: nor have their effects been leſs violent when taken into the ſtomach. It is ſuſpected to have proved poiſonous to ſheep. *Haller hiſt. helv. p.* 75.

It begins to flower in May and June, and continues in bloſſom all the ſummer, by the ſides of ponds and ditches.

It is eaten by goats, but refuſed by kine, ſheep, and horſes. *Lin. Amæn. Acad.*



Ranunculus sceleratus


Saponaria officinalis
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SAPONARIA OFFICINALIS. SOPEWORT.

SAPONARIA *Lin. Gen. Pl.* DECANDRIA DIGYNIA.
Cal. 1-phyllus, nudus. *Petala* 5, unguiculata. *Capſ.* oblonga, 1-locularis.

Raii Syn. HERBÆ PENTAPETALÆ VASCULIFERÆ.

SAPONARIA *officinalis*, calycibus cylindricis foliis ovato-lanceolatis. *Lin. Syſt. Vegetab. p.* 347. *Spec. Pl.* 584.

SAPONARIA foliis ovato-lanceolatis, trinerviis; floribus tubuloſis, umbellatis. *Haller hiſt. helv. n.* 980.

LYCHNIS *officinalis. Scopoli. Fl. Carniol. p.* 303. *n.* 510.

SAPONARIA major lævis. *Bauhin. pin.* 206.

SAPONARIA *Ger. emac.* 444.

SAPONARIA vulgaris. *Parkinſon.* 641.

LYCHNIS Saponaria dicta. *Raii Syn. p.* 339. Common Sopewort. *Hudſon Fl. Angl. p.* 339. *Oeder. Fl. Dan. icon.* 543.

RADIX perennis, cortice rubente tecta, profunde deſcendens, lateque reptans, gemmis vivacibus inſtructa, hinc tritici repentis æmulus, ex hortis difficillime extirpatur.

CAULES pedales et ultra, erecti, rigidi, teretes, ſubrubentes, geniculati, ſuperne ramoſi, ramis oppoſitis.

FOLIA ovato-lanceolata, connata, brachiatim oppoſita, glabra, trinervia, patentia.

FLORES terminales, ſubumbellati, carnei.

CALYX: PERIANTHIUM monophyllum, tubuloſum, baſi intropreſſum, ſcabriuſculum, oblongum, quinquedentatum, *fig.* 1.

COROLLA: PETALA quinque; *ungues* anguſti, angulati, calyce paulo longiores, *fig.* 3, 4; *limbus* planus, obcordatus, baſi bidentatus, *fig.* 3.

STAMINA: FILAMENTA decem, ſubulata, longitudine tubi corollæ, alterna unguibus petalorum inſerta: ANTHERÆ oblongæ, pallidæ, *fig.* 5.

PISTILLUM: GERMEN oblongum, teretiuſculum, tranſverſe rugoſum, viride: STYLI duo, ſubulati, albi: STIGMATA ſimplicia, *fig.* 6, 7, 8.

PERICARPIUM: CAPSULA oblonga, unilocularis, longitudine calycis, ventricoſa, calyce tecta, ore quadridentato, *fig.* 9.

SEMINA plurima, nigricantia, reniformia, ſuperficie granulatâ, *fig.* 10, 11.

ROOT perennial, covered with a reddiſh colour bark, ſtriking deep into the ground, and ſpreading wide, furniſhed with living buds, whence, like Couch-Graſs, it is with the greateſt difficulty rooted out of gardens.

STALKS a foot or more in height, upright, rigid, round, of a reddiſh colour, jointed, at top branched, the branches oppoſite.

LEAVES of an oval pointed ſhape, connate, alternately oppoſite, ſmooth, with three ribs, and ſpreading.

FLOWERS terminal, forming a kind of umbell, fleſh coloured.

CALYX: a PERIANTHIUM of one leaf, tubular, preſſed in at the baſe, roughiſh, oblong, with five teeth, *fig.* 1.

COROLLA: five PETALS, the *claws* narrow, angular, a little longer than the Calyx, *fig.* 3. 4; the *limb* flat, inverſely heart-ſhaped, furniſhed at bottom with two little teeth, *fig.* 3.

STAMINA: ten FILAMENTS, tapering, the length of the tube of the Corolla; the alternate ones inſerted into the claws of the petals: ANTHERÆ oblong, of a pale colour, *fig.* 5.

PISTILLUM: GERMEN oblong, roundiſh, tranſverſly wrinkled, and green: STYLES two, tapering, and white; STIGMATA ſimple, *fig.* 6, 7, 8.

SEED-VESSEL: an oblong CAPSULE of one cavity, the length of the Calyx, bellying out, covered with the Calyx; the mouth having four teeth, *fig.* 9.

SEEDS numerous, blackiſh, kidney ſhaped, the ſurface granulated, *fig.* 10, 11.

The name of *Sopewort* has been given to this plant, from its anſwering, in a conſiderable degree, the purpoſes of ſope, forming like it, a lather with water, and taking out ſpots of greaſe, &c. from cloth in the ſame manner; whence it has been called the *Fuller's-herb.*

Some botaniſts are ready to doubt whether this herb be a native of Great-Britain; but the teſtimonies of GERARD and RAY, appear ſufficient to confirm it as ſuch. Being often cultivated in gardens, on account of its beauty, it is no doubt often found among the *refuſe of gardens*; and the plants which we have here and there met with in a few places about town, may probably have been of this kind.

It is ſaid naturally to grow in moiſt ſituations; and flowers during the months of July, Auguſt, and September.

There are ſeveral varieties of it cultivated in the gardens, from the perfectly white to the deep purple bloſſom'd, both ſingle and double; as alſo that ſingular variety the *Saponaria concava anglica* of BAUHIN and MORISON, in which the leaves ſurround the ſtalk, and the bloſſom becomes monopetalous, but generally ſplit, and deſtitute of the other parts of the fructification; found originally by GERARD, in a ſmall grove of a wood called the *Spiney*, near *Lichbarrow*, in *Northamptonſhire*; where, according to the teſtimony of MORTON, *hiſt. nat. agr. North.* it is no longer to be found; and which variety appears more like a *luſus naturæ*, as RAY conſiders it, than a mule plant, produced betwixt a Gentian and the Sopewort, as LINNÆUS firſt ſuggeſted.

All theſe varieties are eaſily cultivated: indeed much care is required, that they do not ſpread too much in the garden.

A decoction of the dried herb, does not form a lather ſo well as that of the freſh herb. A decoction of the dried root, makes a lather exactly like a ſolution of ſope, but not ſo ſlippery; *Berg. Mat. Med.*

Greaſe and dirt were waſhed out with it, but not ſtains; *idem.*

The root taſted not bitter, but ſweet; afterwards warm and biting in the throat; *Rutty Mat. Med.*

The taſte of the leaves bitter, mucilaginous, ſlightly auſtere, and acrid, and if chewed long, quite acrid: the decoction alſo bitter, and auſtere; but not changed by vitrol of iron; *idem.*

The watery infuſion of the dried herb, ſuddenly became of a blackiſh green colour, by the addition of vitriol of iron; but not the infuſion of the root; *Bergius.*

In baths and lotions, it has been made uſe of to cleanſe and beautify the ſkin; *idem.*

Internally the decoction of the whole herb is ſudorific, and promotes the menſes; *idem.*

If the decoction be very ſtrong, it proves purgative; *idem, ex Mangeto.*

The leaves and root are made uſe of in the aſthma: half a dram of the root taken with honey, promotes expectoration; *idem.*

In the jaundice, chronic diſeaſes, and obſtructions of the viſcera, it has been recommended by BOERHAVE; *Haller hiſt. helv.*

By others it has been recommended in venereal and ſcrophulous diſeaſes, particularly in the former by STAHL, who deemed it ſuperior to Sarſaparilla; *Newman's Chem.* by *Lewis.*

GALIUM *APARINE.* CLEAVERS, or GOOSE GRASS.

GALIUM *Linnæi Gen. Pl.* TETRANDRIA MONOGYNIA.

Cor. 1-petala, plana. *Sem.* 2, ſubrotunda.

Raii Gen. 12. HERBÆ STELLATÆ.

GALIUM *Aparine* foliis octonis lanceolatis, carinis ſcabris retrorſum aculeatis, geniculis villoſis, fructibus hiſpidis. *Linnæi Syſt. Vegetab. p.* 127. *Sp. Pl.* 157. *Flor. Suecic. p.* 45.

GALIUM caule ſerrato, foliis ſenis, linearibus, lanceolatis, ſerratis, petiolis unifloris. *Haller hiſt. helv. n.* 723.

GALIUM *Aparine. Scopoli Fl. Carniol. n.* 157.

APARINE vulgaris. *Bauhin. Pin.* 334.

APARINE *Gerard emac.* 1122. *Parkinſon* 567. *Raii Syn. p.* 225, Cleavers, or Gooſe-Graſs. *Hudſon Fl. Angl. p.* 57. *Oeder Flor. Dan. icon.* 495. *Lightfoot Flor. Scot. p.* 117.

RADIX annua, fibroſa.

CAULIS tetragonus, angulis retrorſum aculeatis, debilis, fragilis, geniculatus, baſi articulorum villoſus, ramoſiſſimus, ad quatuor et ultra pedes altus, proxima quæque ſcandens, adhæreſcenſque.

RAMI oppoſiti.

FOLIA ſena ad octona, lanceolato-linearia, mucronata, ſuperne ſcabra, inferne glabra margine et carina retrorſum aculeatis.

FLORES pauci, parvi, albidi, petiolis ſcabris inſidentes.

CALYX nullus.

COROLLA minima, monopetala, rotata, albida, quadripartita, laciniis ovato-acutis, *fig.* 1.

STAMINA: FILAMENTA quatuor, brevia, alba: ANTHERÆ luteæ, *fig.* 2.

PISTILLUM: GERMEN didymum, inferum, villoſum: STYLI duo Corollâ breviores: STIGMATA globoſa, *fig.* 4, 5, 6,

PERICARPIUM: BACCÆ duæ, ſiccæ, globoſæ, coalitæ, hiſpidæ, aculeis recurvis, *fig.* 7.

SEMINA ſolitaria, reniformia, magna.

ROOT annual, fibrous.

STALK quadrangular, the angles furniſhed with aculei or prickles, which bend backward, weak, brittle, and jointed; the bottom of the joints villous, very much branched, growing to four feet or more high, climbing and adhering to every plant near it.

BRANCHES oppoſite.

LEAVES growing ſix or eight together, of a ſhape betwixt lanceolate and linear, terminating in a point, rough on the upper ſide, on the under ſide ſmooth, the edge and midrib, or keel, rough, with ſharp prickles bending backwards.

FLOWERS few, ſmall, and whitiſh, ſitting on rough foot-ſtalks.

CALYX wanting.

COROLLA very minute, monopetalous, wheel-ſhaped, of a whitiſh colour, divided into four oval pointed ſegments, *fig.* 1.

STAMINA: four ſhort white FILAMENTS: ANTHERÆ yellow, *fig.* 2.

PISTILLUM: GERMEN double, below the Corolla, villous: STYLES two, ſhorter than the Corolla: STIGMATA globular, *fig.* 4, 5, 6.

SEED-VESSEL: two dry globular BERRIES, ſlightly joined together, rough with prickles bending back at the point, *fig.* 7.

SEEDS ſingle, ſomewhat kidney ſhaped, and large.

This plant has moſt probably obtained its name of *Cleavers*, from its cleaving or adhering to whatever it comes in contact with, which it is in a peculiar manner enabled to do, by its hooked prickles; and that of *Gooſe-Graſs*, from its being a favourite food of Geeſe.

It abounds in all cultivated ground, and by its quick growth, is apt to overpower many plants both in the garden and field. Young quickſet hedges, in a particular manner, ſhould be carefully freed from it. It is an early blowing plant, and produces its ſeed from June to September.

DIOSCORIDES obſerves, that the ſhepherds made uſe of it as a ſtrainer to filter their milk through.

If the accounts given of it, by writers on the Materia Medica, are to be depended on, it is not without conſiderable medicinal powers.

The expreſſed juice of the ſeeds, ſtalks, and leaves, are powerful againſt the bites of vipers and ſpiders; and the ſame dropt into the ears, cures the pain of them; *Raii hiſt. p.* 484.

The herb mixed with lard, diſſolves ſcrophulous ſwellings; *idem.*

The tops are an ingredient in ſpring broth, for purifying the blood; *Rutty Mater. Med.*

The ſeeds have been made uſe of by ſome inſtead of coffee; *idem.*

A ſtrong decoction of the herb, taken to the quanity of twelve ounces, morning and evening, has brought away gravel in many caſes; *idem.*

The root eaten by birds, has tinged their bones of a red colour, as in experiments made with madder; *idem.*

A decoction of the plant has proved highly ſerviceable in a ſimple gonorrhæa; *D. Palmer apud Dale.*

Of late this plant has been much celebrated in ſcrophulous and cancerous ſores: but experiments carefully made with it, in St. Thomas's Hoſpital, have not turned out in its favour.

It is eaten by horſes, kine, ſheep, and goats, but refuſed by ſwine; *Linn. Amæn. Acad.*

The Calyx in this ſpecies, is certainly wanting.



Galium aparine



Sansom Sculp

Agaricus ovatus

AGARICUS OVATUS. PUCKER'D MUSHROOM.

AGARICUS *Linnæi Gen. Pl.* CRYPTOGAMIA FUNGI.

Raii Syn. Gen. 1. FUNGI.

AGARICUS *ovatus* pileo ovato ſubplicato, ſtipite nudo ad baſin attenuato ſcabriuſculo; lamellis creberrimis ſubcoaleſcentibus.

AMANITA pileo ovato ſtriato, cinereo, annulato, fugaci. *Haller hiſt. helv. n.* 2479.

AGARICUS *ovatus. Scopoli Fl. Carniol. n.* 1579. Diagn. *Albus, ceſpitoſus; vertice ruſeſcente; ſtipite cylindrico et annulo fugaci cincto.*

AGARICUS; volva exceptus, pileo campanulato, ſtriato, vertice lævi, petiolo annulato, cylindraceo, fiſtuloſo, in baſin roſtratum deſinente. *Gleditch, Method. Fungor. p.* 89.

FUNGUS, qui volvam vix egreſſus in atramentum reſolvitur, pileolo campanulato, plumbeo, vertice lævi, reliqua parte ſtriato, pediculo cylindrico, albo, fiſtuloſo, radice roſtrata. *Michel. N. Pl. G.* 189. *t.* 80. *f.* 5.

FUNGUS multiplex ovatus cinereus. *Vaill. p.* 73. *t.* 12. *fig.* 10, 11.

FUNGUS ſuperficiei murini coloris, lamellis albicantibus. *Raii Syn. p.* 5. 21.

AGARICUS *plicatus*, ſtipitatus, pileo ovato ſtriato plicato cinereo, vertice lævi, ſtipite annulato fiſtuloſo, baſi ſubulato. Pucker'd Agaric, *Lightfoot Flora Scotica. p.* 1023. *Schæffer. icon. tab.* 17, 67, 68.

STIPES: Stipites plures e terrâ aut ligno ſemiputrido aggregatim aſſurgentes, inferne extra pileum *ſcabriuſculi*; ad baſin attenuati, fuſci, ſuperne intra pileum albiſſimi, ſubſulcati, ad apicem ſenſim attenuati, in adultis ſtipes ſemipedalis, ſubcylindricus, lævis, craſſitie minimi digiti aut major evadit, modice firmus et carnoſus, fiſtuloſus, nudus; tranſverſim ſectus circulos in carne exhibens.

VOLVA nulla.

PILEUS *primum* ovatus aut obtuſe conicus, circa orem contractus, et ſubplicatus, ſolidus, ponderoſus, pallide fuſcus; in *adultis* ſubcampanulatus, latitudine ad tres uncias accedens, murinus, maculis umbrinis aut ferrugineis præcipue ad verticem notatus, vertex ſaturatius colorata, lævis, ſubinde vero ſubſquamoſa; latera plus minuſve ſulcata, *demum* fere planus, margine revoluto.

LAMELLÆ *creberrimæ, compactæ*, latæ, *filamentis tranſverſis nudo oculo inconſpicuis connexæ*, unde, ita coaleſcunt (preſertim in junioribus) ut lamellam integram vix ſeparare queas, primum albæ, mox pars inferior dimidia nigreſcit, et tandem totæ lamellæ in liquamen atramentoſum reſolvuntur; ſuperficies interna pilei in junioribus farinâ ſubtiliſſimâ canâ adſperſa.

STALKS, generally ſpringing from the earth, or decayed wood, in cluſters; the lower part, without the cap, roughiſh, of a brown colour, and tapering to the baſe; the upper part, within the cap, very white, ſlightly grooved, and tapering gradually to the top; when full grown, it becomes ſix inches high, nearly cylindrical, ſmooth, and the thickneſs of the little finger, or larger, moderately firm and fleſhy, hollow and naked, and cut through the middle ſhews circles in the fleſhy part.

RING wanting.

CAP *firſt* oval or obtuſely conical, the mouth contracted, and puckered around the ſtalk, ſolid, heavy, and of a light brown colour; *in the full grown ones*, ſomewhat bell-ſhaped, about three inches in breadth, of a mouſe colour, marked with umber coloured or ferruginous ſpots, particularly at the top; the top of a deeper colour, ſmooth, but ſometimes ſlightly chopped; the ſides more or leſs deeply grooved, becoming *finally* almoſt flat, the edge curling up.

GILLS *very numerous*, compact, and broad, *connected together by tranſverſe filaments, inconſpicuous to the naked eye*, whence they ſo coaleſce, that it is difficult to ſeparate a ſingle gill entirely; at firſt white, quickly the lower half becomes of a blackiſh colour, and laſtly the whole of the gills diſſolves into a black inky liquid: the internal ſurface of the cap, in the young ones, is ſprinkled over with a very fine grey powder.

It appears to be a matter of much doubt, whether this *Fungus*, common as it appears to be in moſt parts of Europe, be deſcribed by LINNÆUS. Certainly there are none of his *Agarici*, which accord exactly with ours: neither do HALLER, or SCOPOLI, quote LINNÆUS in their deſcriptions of it. SCHÆFFER, who appears to be too fond of multiplying plates, has given it in no leſs than three. It is true, by this means, the plant is repreſented in its various ſtates; but, perhaps, theſe might have been ſatisfactorily exhibited in a ſingle one.—If plants are thus to be delineated in all their varieties, natural hiſtory muſt ſink under its own weight.

I ſuſpect this ſpecies to be the *Fungus ſuperficie murini coloris lamellis albicantibus* of RAY, *p.* 5. *n.* 21. but cannot fix it with certainty. SCOPOLI has given it the name of *ovatus*, which I have retained, with Mr. LIGHTFOOT's Engliſh name, who has very accurately deſcribed it. I agree with him entirely in conſidering it as a ſpecies diſtinct from the *fimetarius*, and with which, in my opinion, it has but little real affinity. The deſcription and figure here given, when contraſted, will make it unneceſſary to particularize the peculiarities which diſtinguiſh each. But there is a ſingularity of ſtructure, occurring in the *ovatus*, which ſeems worthy of remark. The Gills are connected together by numerous tranſverſe bars or filaments, diſcoverable only when greatly magnified: the uſe of theſe appears to be to keep the Gills at an equal diſtance from each other, and thereby prevent the fructifications which are ſituated on the flat ſurface of the lamellæ, from being preſſed on, and deſtroyed, by their very great cloſeneſs. I have not hitherto obſerved this peculiarity of ſtructure in any other *Fungus*: in the *fimetarius* it certainly does not exiſt. Theſe connecting filaments in the *ovatus*, make it exceeding difficult to ſeparate one of the lamellæ entire.

Theſe Fungi are very common with us in the borders of wet meadows, near the roots of willow trees, in gardens alſo, near houſes, and by the ſides of roads. They are found in the greateſt plenty, from the biginning of September to the end of October. I have alſo found the ſame ſpecies in July. From the time of their ſpringing up, to the time of their beginning to decay, is about five days. Their manner of decaying is ſimilar to that of the *fimetarius*, and ſeveral others; the Gills diſſolving into a very black liquor, like ink, which dropping, carries with it the ſeed of the Muſhroom, which is obſervable in the liquor if greatly magnified.

It varies in ſize, and alſo in colour, chiefly from a lighter to a paler brown.

The Gills are often found full of little maggots.

There is no reaſon to ſuſpect its being poiſonous, nor yet can it be recommended as eatable.

CHENOPODIUM VIRIDE. PURPLE-JOINTED GOOSEFOOT.

CHENOPODIUM *Linnæi Gen. Pl.* PENTANDRIA DIGYNIA.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO, SEU STAMINEO, VEL APETALO POTIUS.

CHENOPODIUM *viride* foliis rhomboideis dentato-ſinuatis, racemis ramoſis ſubfoliatis. *Linnæi Syſt. Vegetab. p.* 216. *Sp. Pl.* 319. *Flora Suecic. p.* 79.

CHENOPODIUM foliis rhomboideis, dentatis, ſubtus incanis. *Haller hiſt. helv. p.* 267. *n.* 1580.

CHENOPODIUM *viride. Scopoli Fl. Carniol. n.* 280.

Hudſon Fl. Angl. p. 91.

Lightfoot Fl. Scot. p. 149. *n.* 6.

I have been cautious in referring to the ſynonyma of authors on this plant, ſeeing they differ ſo much in their opinions reſpecting it; and have rather wiſhed that the plate here given, might ſerve as a reconciliatory reference. LINNÆUS and HALLER both ſeem to doubt its being a ſpecies diſtinct from the *album*, and it muſt be confeſſed there is a great ſimilarity betwixt them; yet if my obſervations are juſt, there is every reaſon to conſider them as two plants perfectly diſtinct.

They agree in this, that they are both annual plants, both grow in the ſame ſoil and ſituations, are nearly alike in their ſize and habit, and both flower about the ſame time; and yet they differ in many reſpects very eſſentially. That which, in a more ſtriking manner, diſtinguiſhes the *viride* from the *album*, is the greener appearance of the whole plant, the bright red colour at the angles of the joints, which is conſtant, and the ſhape of the leaf, *fig.* 1, which is always much longer than that of the *album*. The *album* is loaded with an appearance of meal, which gives it its white colour; the *viride*, though not deſtitute of it, has it not in that profuſion. When the ſeeds are ripe, the tops of the ſtalks, in the *viride*, are more apt to hang down; the parts of the fructification, *fig.* 1, 3, 4, 5, are very ſimilar, but ſmaller; and the calyx is not quite ſo much covered with little globules; the ſeeds of each differs very conſiderably, and affords a very curious and ſatisfactory diſtinction: in the *album* it is perfectly ſmooth, *glaber;* in the *viride* it is ſmaller, and reticulated with impreſſed dots, *reticulatis punctis impreſſis*, *fig.* 6.

Like ſome of the other ſpecies of this genus it is eaten as a pot-herb.



Chenopodium viride

N.° 108



Viola canina

VIOLA CANINA. DOG'S VIOLET.

VIOLA *Linnæi Gen. Pl.* SYNGENESIA MONOGAMIA.

Calyx pentaphyllus. *Corolla* pentapetala, irregularis, poſtice cornuta. *Capſula* ſupera, trivalvis, unilocularis.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

VIOLA *canina,* caule adultiore adſcendente, foliis oblongo-cordatis. *Linnæi Syſt. Vegetab. p.* 668.

VIOLA caule procumbente, ramoſo, foliis petiolatis cordatis. *Haller hiſt. helv. n.* 563.

VIOLA *canina. Scopoli Fl. Carniol. n.* 1098.

VIOLA martia inodora ſylveſtris. *Bauhin Pin. p.* 364.

VIOLA *canina* ſylveſtris. *Ger. emac.* 851.

VIOLA ſylveſtris. *Parkinſon* 755. *Raii Syn. p.* 364. Wild, or Dog's Violet. Viola canina minor. *Raii Syn.* 364. *t.* 24. *fig.* 1. *Hudſon Fl. Angl. p.* 331.

RADIX perennis, craſſitie pennæ coracis, obliqua, fibras longiuſculas tenaces dimittens, ſuperne ſubdentatus ex reliquiis petiolorum.

ROOT perennial, about the thickneſs of a crow quill, oblique, ſending down ſome longiſh fibres of a toughiſh ſubſtance, on the upper part ſomewhat toothed or knobbed, from the remains of the leaf ſtalks.

CAULIS ſuberectus, triuncialis, ſubanguloſus, *lævis, folia floreſque ferens.*

STALK nearly upright, about three inches high, ſomewhat angular, *ſmooth, bearing both leaves and flowers.*

FOLIA cordata, lævia, crenata, ſubtus ſæpe purpuraſcentia, ſuperiora oblongo-cordata.

LEAVES heart-ſhaped, ſmooth, crenated, and oftentimes purpliſh underneath; the upper leaves of a longer ſhape.

STIPULÆ caulinæ lanceolatæ, pilis rigidiuſculis ciliatæ.

STIPULÆ of the ſtalk lanceolate, and edged with ſtiffiſh hairs.

PEDUNCULUS tetragonus, bractæis duabus ſetaceis inſtructus.

FLOWER-STALK ſquare, furniſhed with two narrow pointed floral leaves.

FLOS purpureus, inodorus, majuſculus.

FLOWERS purple, ſcentleſs, and rather large.

CALYX: PERIANTHIUM pentaphyllum, foliolis lanceolatis, acuminatis, nervoſis, baſi dentatis; tribus ſuperioribus ſuperne tuberculoſis, apicibus recurvatis, duobus inferioribus longioribus, *fig.* 1.

CALYX: a PERIANTHIUM of five leaves, which are lanceolate, pointed, ribb'd, and indented at the baſe; the three uppermoſt a little uneven on their upper ſurface, the points bending upward; the two lowermoſt longer, *fig.* 1.

COROLLA, ut ut Stamina cum Piſtillo, a duabus ſpecibus jam deſcriptis (vid. odorata et hirta) vix diſcrepant, petala lateralia baſi barbata ſunt, *fig.* 2, petalumque inferius ad baſin lineis ſaturate purpureis pingitur.

COROLLA, as well as the Stamina and Piſtillum, differ very little from the two ſpecies already deſcribed, (viz. the ſweet-ſcented and hairy) having the lateral petals bearded at the baſe, *fig.* 2, and the baſe of the lowermoſt petal, painted with deep purple lines.

CAPSULA oblonga, trigona, trivalvis, valvulis cymbiformibus, *fig.* 3.

CAPSULE oblong, three-cornered, having three valves, which are boat-ſhaped, *fig.* 3.

SEMINA plurima, glabra, pallida, flaveſcentia, in ſingulâ valvulâ, 7, 9, *fig.* 4.

SEEDS numerous, ſmooth, of a pale yellowiſh colour, in each valve 7 or 9, *fig.* 4.

The *Dog Violet* differs from the *Sweet Violet* in many particulars; the chief of which are,

Firſt, The flowers have no ſmell.

Second, The flowers grow on foot-ſtalks which ſpring from the ſtalk, and not the root, and are in general of a larger ſize.

Third, The ſtipulæ, next the root and on the ſtalk, are very ſtrongly edged with ſtiff hairs.

Fourth, The ſegments, or leaves of the calyx, are pointed.

Fifth, The ſeed-veſſel is oblong and three-cornered.

It differs from the *hairy Violet* alſo, in all theſe reſpects except the firſt.

The ſame peculiar circumſtances of producing ſeed during the ſummer months, without any expanded corolla, takes place alſo in this ſpecies.

It grows with us in greater abundance than either the *Viola odorata* or *hirta,* in our woods, and under hedges; and begins to flower in April, when both the others are going out of bloom.

It varies in colour, being ſometimes found with white bloſſoms; in ſize alſo, according to the expoſed or ſheltered ſituation in which it grows, it differs very much: and there is little doubt, but the *Violet* repreſented in RAY's *Synopſis, pl.* 24. *fig.* 1. is the *Viola Canina* in its ſmall ſtate, though the figure be imperfect as to its characters.

HALLER obſerves, that thoſe who collect Violet bloſſoms for making the ſyrup, are apt to ſubſtitute this ſpecies: but this cannot often happen: ſhould theſe flowers alone be expoſed for ſale, they may be detected by their want of ſmell; ſhould they be mixed with a few of the ſweet ones, they may be diſcovered by the pointed ſhape of the leaves of the calyx.

RUMEX CRISPUS. CURLED DOCK.

RUMEX *Linnæi Gen. Pl.* HEXANDRIA TRIGYNIA.

Cal. 3-phyllus. *Petala* 3-conniventia. *Sem.* 1, triquetrum.

Raii. Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

RUMEX *criſpus* floribus hermaphroditis: valvulis integris graniferis, foliis, lanceolatis undulatis acutis.

Linnæi Syſt. Vegetab. p. 284. *Spec. Plant. p.* 478. *Fl. Suecic. p.* 117.

LAPATHUM foliis criſpis, imis ovatis, ſupremis lanceolatis, calycibus verrucoſis. *Haller hiſt. n.* 1589.

LAPATHUM *criſpum. Scopoli Fl. Carniol. p.* 261.

LAPATHUM folio acuto criſpo. *Bauhin. Pin.* 115.

LAPATHUM acuti varietas folio criſpo. *Ger. emac.* 387.

LAPATHUM acutum minus. *Parkinſon*, 226.

Raii Syn. p. 141. Sharp-pointed Dock with curled leaves.

Hudſon Fl. Angl. p. 134.

Lightfoot Fl. Scot. 108.

RADIX perennis, flaveſcens, fuſiformis, per ætatem ſuperne ramoſus evadit.

ROOT perennial, tapering, of a yellowiſh colour, becoming branched at top as it grows old.

CAULIS bipedalis aut tripedalis, erectus, ſtriatus, lævis, ramoſus.

STALK two or three feet high, upright, finely grooved, ſmooth, and branched.

FOLIA lanceolata, undulata, acuta, ſubtus venoſa, petiolis ſulcatis.

LEAVES lanceolate, waved, pointed, underneath veiny, the foot-ſtalks grooved.

FLORES in ſpicas denſiſſime glomerati, caulem penitus fere occultantes.

FLOWERS crowded very thickly together in ſpikes, and almoſt entirely hiding the ſtalk.

CALYX: PERIANTHIUM triphyllum, foliolis cymbiformibus, corollâ brevioribus, *fig.* 1.

CALYX: a PERIANTHIUM of three leaves, which are boat-ſhaped, and ſhorter than the Corolla, *fig.* 1.

COROLLA: PETALA tria, ovata, concava, demum conniventia, magna, granifera, venoſa, reticulata, integra, SEMEN unicum, triquetrum, nitidum, pallide fuſcum foventia, *fig.* 3, 7, 8, 9.

COROLLA: three oval, hollow PETALS, finally becoming cloſed, and large; each bearing a grain, veiny, reticulated, entire at the edges, including a three-cornered, ſhining, pale brown SEED, *fig.* 3, 7, 8, 9.

STAMINA: FILAMENTA tria, capillaria, brevia: ANTHERÆ flavæ, *fig.* 3.

STAMINA: three very fine ſhort FILAMENTS: ANTHERÆ yellow, *fig.* 3.

PISTILLUM: GERMEN triquetrum: STYLI tres, reflexi: STIGMATA laciniata, *fig.* 4, 5, 6.

PISTILLUM: GERMEN three-corner'd: STYLES three, turning back: STIGMATA jagged, *fig.* 4, 5, 6.

The *Docks*, like the ſeveral ſpecies of *Gooſefoot* and *Orach*, are with difficulty diſtinguiſhed from each other.

The ſpecies here figured, is one of the moſt common, as well as the moſt injurious as a weed. It is found in almoſt every kind of ſoil and ſituation; as in wet meadows, by the ſides of roads, and in cultivated ground, into which it is generally introduced with dung. I have remarked ſome Clover fields in which this plant formed nearly one half of the crop.

It may be diſtinguiſhed from the other *Docks* by its *yellow root*, *waved leaves*, and large and numerous ſeed-coverings, which grow ſo thick as almoſt to hide the ſtalk, and which are larger than in moſt of the other *Docks*, of a roundiſh ſhape, with prominent veins, and an entire or ſlightly waved edge.

It flowers in June, July, and Auguſt.



Rumex crispus

Sansom Sculp.



Epilobium angustifolium

Sansom Sculp

EPILOBIUM ANGUSTIFOLIUM. ROSEBAY WILLOW-HERB.

EPILOBIUM *Linnæi Gen. Pl.* OCTANDRIA MONOGYNIA.

Cal. 4-fidus. *Petala* 4. *Capſ.* oblonga, infera. *Sem.* pappoſa.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.

EPILOBIUM *anguſtifolium* foliis ſparſis lineari-lanceolatis, floribus inæqualibus. *Linnæi Syſt. Vegetab. p.* 296. *Sp. Pl.* 347.

EPILOBIUM flore difformi, foliis lanceolatis, tranſverſim nervoſis. *Haller hiſt. n.* 427.

CHAMÆNERION *anguſtifolium. Scopoli Fl. Carn. Vol. I. p.* 271.

LYSIMACHIA ſpecioſa, quibuſdam onagra dicta filiquoſa. *Bauhin hiſt. II.* 906.

LYSIMACHIA Chamænerion dicta anguſtifolia. *Bauhin. Pin.* 245. *Raii Syn.* 310. Roſebay Willow-herb. *Hudſon Flor. Ang. p.* 140. *Lightfoot Flor. Scot. p.* 197. *Oeder Dan. ic.* 289.

RADIX perennis, repens.

CAULIS erectus, tripedalis, ad orgyalem, ramoſiſſimus, teres, pubeſcens, ramis alterne oppoſitis.

FOLIA lanceolata, alterna, ſubdecurrentia, glabra, margine minute remoteque dentatâ, nervo medio albido.

BRACTEÆ foliis ſimiles.

FLORES purpurei, ſpecioſi, ſubſpicati, raro ultra quatuor aut quinque unà in eâdem ſpicâ florentes.

CALYX: PERIANTHIUM tetraphyllum, ſuperum, foliolis lanceolatis, coloratis, ſurſum curvatis, *fig.* 1.

COROLLA: PETALA quatuor, purpurea, patentia, ſubrotunda, emarginata, unguibus anguſtis, *fig.* 2, duobus inferioribus remotioribus.

STAMINA: FILAMENTA octo, ſubæqualia, purpuraſcentia, primum deflexa, demum ſuberecta, Piſtillo breviora: ANTHERÆ rubræ, biloculares: POLLEN viride, *fig.* 3, 4.

PISTILLUM: GERMEN inferum, oblongum, longitudine Styli, ſubtetragonum, glandula coronatum: STYLUS filiformis, albus, prope baſin villoſus: STIGMA quadrifidum, magnum, laciniis villoſis revolutis, *fig.* 5, 6, 7.

PERICARPIUM: CAPSULA cylindracea, incurvata, quadrilocularis, quadrivalvis.

SEMINA numeroſa, ſtriata, pappo coronata Receptaculo longiſſimo tetragono, libero, flexili affixa, *fig.* 8, 9.

ROOT perennial and creeping.

STALK upright, from three to ſix feet high, very much branched, round, and pubeſcent; the branches alternately oppoſite.

LEAVES lanceolate, alternate, running ſlightly down the ſtalk, ſmooth, the edge minutely and rarely indented, the midrib whitiſh.

FLORAL-LEAVES like thoſe on the ſtalk.

FLOWERS purple, ſhewy, growing in a kind of ſpike, ſeldom more than four or five flowering together on the ſame ſpike.

CALYX: PERIANTHIUM of four leaves, placed above the Calyx; the leaves lanceolate, coloured, and bending upwards.

COROLLA: four roundiſh PETALS of a purple colour, ſpreading, the claws narrow, *fig.* 2; the two lowermoſt ſomewhat remote from each other.

STAMINA: eight FILAMENTS, nearly of an equal length, of a purpliſh colour, at firſt bending down, finally becoming ſomewhat upright, ſhorter than the Piſtillum: ANTHERÆ red, having two cavities: the POLLEN green, *fig.* 3, 4.

PISTILLUM: GERMEN below the Calyx, oblong, the length of the Style, ſlightly quadrangular, crowned by a gland: STYLE filiform, white, villous towards the bottom: STIGMA large, divided into four ſegments, which are villous, and turn back, *fig.* 5, 6, 7.

SEED-VESSEL: a CAPSULE of a cylindrical form, ſomewhat incurvated, of four cavities and four valves.

SEEDS numerous, ſtriated, crowned with a down, and affixed to a very long, looſe, flexible Receptacle, *fig.* 8, 9.

In the third edition of RAY's *Synopſis*, this plant is ſaid to have been found growing wild near *Alton*, in *Hampſhire:* in confirmation of this, I have myſelf found it growing in a wild unfrequented wood near the ſame place.

The ſhewy appearance of its bloſſoms, has long ſince introduced it into our gardens; where, by means of its creeping roots, it is apt to increaſe more than is deſirable: and from the refuſe of gardens, we ſuſpect thoſe plants, which we have here and there noticed about town, have ariſen. Mr. HUDSON, in his *Flora Anglica*, mentions its growing on *Maize Hill*, beyond *Greenwich.*

It continues in bloſſom through July, Auguſt, and September.

HALLER, from ſeveral authors, mentions, that the young ſhoots are eatable, although an infuſion of the plant ſtupifies; that the pith alſo is eatable; which when dried, is boiled, whence it becomes ſweet, and by a proper proceſs, affords good beer; as alſo vinegar: that it is alſo added to the Cow Parſnep, to enrich the ſpirit which is prepared from that plant: that it likewiſe affords good fodder for cattle; and the down of the ſeeds, mixed with beavers hair, has been manufactured into ſeveral articles of clothing.

It is too diſtinct to be miſtaken for any of the other ſpecies; and is ſometimes found with white flowers.

BROMUS HIRSUTUS. HAIRY-STALK'D BROME-GRASS.

BROMUS *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis. *Spicula* oblonga, teres, diſticha; ariſta infra apicem.

Raii. Syn. Gen. 27. GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

BROMUS *hirſutus* panicula nutante ſcabra, ſpiculis teretibus ſublinearibus decemfloris, ariſtis rectis, vaginis foliorum hirſutis.

BROMUS *ramoſus* panicula nutante ſcabra, ſpiculis linearibus decemfloris, ariſta longioribus, foliis ſcabris. *Hudſon Fl. Angl. p.* 40.

BROMUS foliis hirſutis, per oras aſperrimis, locuſtis glabris, teretibus, novemfloris. *Haller hiſt. n.* 1503.

BROMUS *giganteus*. *Scopoli Flor. Carn.* var. 2. villoſa et major.

GRAMEN Avenaceum dumetorum panicula ſparſa. *Raii Syn. p.* 415. *Hiſt. Plant. p.* 1289. Buſh or Wood Oat-Graſs, with a ſparſed panicle.

GRAMEN Avenaceum dumetorum paniculatum majus hirſutum. *H. Ox.* 3. 213. 27.

RADIX perennis, plurimis fibris, flexuoſis, flaveſcentibus inſtructa.

CULMUS tripedalis, ad orgyalem aut etiam ſupra, erectus, tribus plerumque nodis articulatus, ſolidus, ſtriatus.

FOLIA: *Vagina* ſtriata, *pilis longis, crebris, rigidiuſculis, deorſum verſis hirſuta: Folia* ipſa pedalia, ſemuncialia, deflexa, ſtriata, rarioribus et brevioribus pilis iiſque ad margines et mediam coſtam præcipue donata.

PANICULA pedalis, ſparſa, rami binati aut ternati, patentes, nutantes, ſcabri, ſæpe flexuoſi.

SPICULÆ plerumque binæ, ſeſquiunciales, tenues, teretiuſculæ, rectæ, vix hirſutæ, decemfloræ, ad baſin annulo diaphano notatæ, *fig.* 3: ARISTÆ breves, ſcabræ, rectiuſculæ, *fig.* 1.

CALYX: GLUMA bivalvis, *fig.* 2; valvulis inæqualibus, majore concavâ, interne nitidâ, trinerve, mucronata, nervis ſcabris, minore unicarinatâ acuminatâ.

COROLLA: GLUMA bivalvis, valvulis inæqualibus, exteriore trinerve, nervis exſtantibus, nervo medio in Ariſtam rectiuſculam Corollâ breviorem definente, interiore planiuſculâ, ciliatâ, breviore, *fig.* 4, 5, 6.

NECTARIUM GLUMULÆ duæ ad baſin Germinis, *fig.* 8.

STAMINA: FILAMENTA tria, capillaria: ANTHERÆ bifurcæ, flavæ, *fig.* 7.

PISTILLUM: GERMEN ſubovatum, baſi nudum, apice villoſum: STYLI duo, uſque ad baſin ramoſi, *fig.* 10.

SEMEN planiuſculum, ariſtatum, glumis adhærentibus, *fig.* 11, 12, 13.

ROOT perennial, furniſhed with numerous, crooked, yellowiſh fibres.

STALK from three to ſix feet high, or more, upright, conſiſting generally of three joints, ſolid and finely grooved.

LEAVES: the *ſheath* ſtriated, *covered with numerous long hairs, which are ſomewhat rigid, and bend backwards:* the *Leaves* themſelves a foot long, and half an inch broad, beſet with fewer and ſhorter hairs, and thoſe chiefly at the edges and midrib.

PANICLE a foot long, ſpreading, the branches growing two or three together, hanging down, rough and often crooked.

SPICULÆ generally growing two together, an inch and a half long, ſlender, roundiſh, ſtraight, ſcarcely hirſute, containing ten flowers, and marked at the baſe with a pellucid ring, *fig.* 3. The ARISTÆ ſhort, rough, and nearly ſtraight, *fig.* 1.

CALYX: a GLUME of two valves, *fig.* 2; the valves unequal; the larger one concave, and ſhining within, having three ribs, and terminating in a ſhort point, the ribs rough; the ſmaller one having only one rib, and a more tapering point.

COROLLA: a GLUME of two valves, the valves unequal, the exterior one having three prominent ribs, the middle one of which terminates in a ſtraightiſh Ariſta, ſhorter than the Corolla; the inner one flattiſh, edged with hairs, and ſhorter than the other, *fig.* 4, 5, 6.

NECTARY: two little GLUMES at the baſe of the Germen, *fig.* 8.

STAMINA: three FILAMENTS, very fine: ANTHERÆ forked and yellow, *fig.* 7.

PISTILLUM: GERMEN ſomewhat oval, naked at bottom, at top villous: STYLES two, branched quite to the bottom, *fig.* 10.

SEED flattiſh, terminated by an ariſta, the Glumes adhering to it, *fig.* 11, 12, 13.

That the plant here figured, is not the *Bromus ramoſus* of LINNÆUS, I have learned from Dr. SOLANDER and Mr. BANKS, whoſe authority in this matter will not be controverted.

I have therefore called it *hirſutus*, from a wiſh that a trivial name might be given it, which ſhould not only characterize the plant, but, at the ſame time, diſtinguiſh it from a Graſs which is undoubtedly often miſtaken for it, as it frequently grows with it, is nearly of the ſame height, and flowers about the ſame time: I mean the *Bromus giganteus* of LINNÆUS, figured by SCHREBER, the leaves and ſtalks of which are *perfectly ſmooth.*

The *Bromus hirſutus* is the talleſt of our Engliſh graſſes, often exceeding ſix feet in height, which renders it a very conſpicuous graſs. The *Feſtuca elatior*, and *Bromus giganteus*, will however often grow nearly as high in particular ſituations.

It occurs in moſt of our hedges in the environs of *London*, particularly about *Hampſtead;* abundantly alſo in *Kent;* and flowers in June and July.

Excluſive of its height before mentioned, it is diſtinguiſhed from all our other graſſes by the hairineſs of its ſtalk, or rather the ſheaths of the leaves which cover it; and this, ſo far as I have hitherto obſerved, is an infallible criterion.

It appears to be too coarſe a graſs to be cultivated for cattle; and we do not learn that it has been applied to any other purpoſes.



Bromus hirsutus

Sansom Sculp



Lotus corniculatus

LOTUS CORNICULATUS. BIRDS-FOOT TREFOIL.

LOTUS *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA.

Legumen cylindricum, ſtrictum. *Alæ* ſurſum longitudinaliter conniventes.

Cal. tubuloſus.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

LOTUS *corniculatus* capitulis depreſſis, caulibus decumbentibus, leguminibus cylindricis patentibus.

Lin. Syſt. Vegetab. p. 576.

LOTUS floribus umbellatis; ſiliquis cylindricis; rectiſſimis. *Haller. hiſt. helv. p.* 572. *n.* 3.

LOTUS *corniculatus. Scopoli Fl. Carniol. p.* 86.

LOTUS ſive melilotus pentaphyllos minor glabra. *Bauhin Pin.* 332.

TRIFOLIUM ſiliquoſum minus. *Gerard. emac.* 1191. *Raii Syn.* 334, Birds-foot Trefoil.

Hudſon Flor. Angl. p. 288.

Lightfoot Flor. Scot. p. 411.

RADIX perennis, ſubfuſiformis, in terram alte deſcendens.

CAULES plurimi, tenues, procumbentes, ſubquadrati, pedales, ramoſi.

FOLIA terna, ovata, mucronata, foliolo medio baſi anguſtata, glabra aut hirſutula.

STIPULÆ duæ, foliis quodammodo ſimiles at magis latæ et acuminatæ.

FLORES ſubumbellati, ad 12, petiolis nudis longis inſidentes.

CALYX: PERIANTHIUM tubuloſum: infra medium annulo prominulo cinctum, quinquedentatum, dentibus ſetaceis, hirſutulis, duobus ſuperioribus ſurſum tendentibus, tribus inferioribus reflexis, *fig.* 1.

COROLLA papilionacea, flava: VEXILLUM reflexum, ſuperne aurantiacum, interne ad baſin lineis octo circiter notatum: ALÆ duæ, flavæ, apicibus obtuſis: CARINA inferne gibba, adſcendens, acuminata, *fig.* 2.

STAMINA: FILAMENTA decem, novem in tubum coalita, ſimplici libero, apicibus omnium dilatatis, albis: ANTHERÆ parvæ, flavæ, *fig.* 3, 4, 5, 6.

PISTILLUM: GERMEN tenue, teretiuſculum, incurvum: STYLUS adſcendens, rectus: STIGMA minimum, *fig.* 7, 8, 9.

PERICARPIUM: LEGUMEN cylindricum, bivalve, iſthmis quaſi interceptum, more raphani, *fig.* 10.

SEMINA plurima, ultra xx, parva, ſubreniformia, maculata, *fig.* 11, 12.

ROOT perennial, tapering, ſtriking deeply into the earth.

STALKS ſeveral, ſlender, procumbent, ſomewhat ſquare, a foot in length, and branched.

LEAVES growing three together, ovate, terminating in a ſhort point, the middle leaf narrowed at its baſe, ſmooth or ſlightly hirſute.

STIPULÆ two, in ſome degree like the leaves, but broader, and more pointed.

FLOWERS growing ſomewhat in the form of an umbell, to twelve, ſitting on long foot-ſtalks.

CALYX: a PERIANTHIUM tubular, below the middle ſurrounded by a prominent ring, having five teeth, which are ſetaceous and a little hairy, the two uppermoſt riſing upward, the three lowermoſt bending back, *fig.* 1.

COROLLA papilionaceous and yellow: the VEXILLUM turned back; on its upper part of an orange colour, underneath, at its baſe, marked with about eight lines: WINGS two, yellow and blunt at the tips: KEEL gibbous below, riſing upwards, and pointed, *fig.* 2.

STAMINA: ten FILAMENTS, nine uniting in a tube; the ſingle one looſe; the tips of all of them dilated, and white: ANTHERÆ ſmall and yellow, *fig.* 3, 4, 5, 6.

PISTILLUM: GERMEN ſlender, roundiſh, and bent downward: STYLE riſing upwards, and ſtraight: STIGMA very minute, *fig.* 7, 8, 9.

SEED-VESSEL: a cylindrical LEGUMEN of two valves, divided into a kind of cells, ſomewhat in the manner of the Radiſh, *fig.* 10.

SEEDS numerous, more than twenty, ſmall, ſomewhat kidney-ſhaped, and ſpotted, *fig.* 11, 12.

The following extract relative to this plant, is ſelected from the firſt volume of Mr. ANDERSON'S *Eſſays relating to Agriculture and Rural Affairs*, page 419.

While the practical remarks, and judicious hints, ſcattered through this performance, ſhew the author to be a man of real genius, and far ſuperior to the common run of writers on theſe ſubjects, we cannot but regret, that a want of botanic knowledge pervades the whole, and in ſome degree, defeats the laudable deſign of the ingenious eſſayiſt. In no one plant, is this inaccuracy more obſervable than in the preſent, which we ſhall point out; hoping, that as the author has in ſome parts of his work, ſhewn himſelf well acquainted with chemical knowledge, ſome future edition may demonſtrate, that he thought *Botany* equally worthy of his attention.

" MILK-VETCH, liquorice-vetch, or milk-wort, as it is differently called,—the * *Aſtragalus glycyphyllos* of " Hudſon, is a plant common in every part of the iſland, although it has never yet, that I have heard of, been " attempted to be cultivated.

" The general appearance of this humble plant, is, in ſome reſpects, very like that of the common white- " clover; although its leaves upon a nearer examination are not exactly ſimilar to them. From the top of the " root

* It is very evident, from the whole tenor of the author's deſcription, that he has given a wrong name to the plant he wiſhed to recommend. The plant he deſcribes, is the *Lotus corniculatus of* HUDSON, or *Birds-foot Trefoil*, and not the *Aſtragalus Glycyphyllos*, or *Liquorice-Vetch*, which is by no means a common plant.

" root there comes out in the ſpring a great number of ſmall ſhoots that ſpread along the ſurface of the ground
" every way around it; from which ariſe a great many cluſters of bright yellow flowers, exactly reſembling thoſe
" of common broom in ſhape, ſize, and colour; which are ſucceeded by hard round pods, filled with ſmall kid-
" ney-ſhaped ſeeds. And as three or four of theſe pods uſually adhere to one foot-ſtalk, from which they ſpread
" open at the points, a little reſembling the fingers of an open hand; they have from this circumſtance been
" by the vulgar in ſome places called ladies-fingers; while others more ſtruck with the reſemblance that theſe
" pods bear to the foot of a bird, have diſtinguiſhed it by the name of crow-toes; and others from the appear-
" ance of the bloſſom and the part where the plant is found, have called it *feal*, or by corruption *fell* broom.
" It is found plentifully almoſt every where in old graſs-fields; but as every ſpecies of domeſtic animal eats it,
" almoſt in preference to every other plant, it is ſeldom allowed to come to flower in paſture grounds, unleſs
" where they have been accidentally ſaved from the cattle for ſome time; ſo that it is only about the borders
" of corn-fields, or the ſides of encloſures to which cattle have not acceſs, that we have an opportunity of
" obſerving it. As it has been imagined that the cows which feed on the paſtures where this abounds, yield
" a great quantity of rich milk, the plant has from that circumſtance obtained its moſt proper Engliſh name
" of milk-vetch.

" But the circumſtance that firſt recommended it to my notice, was the having obſerved that it grows and
" flouriſhes in poor barren ground where almoſt no other plant can be made to live. I have ſeen it in the midſt
" of a barren moor, where the ſoil was ſo poor that even heath, or ling *(erica communis)* could hardly grow,
" and upon bare obdurate clays, where no other plant could be made to vegetate; inſomuch that the ſurface
" remained entirely uncovered, unleſs where a plant of this kind chanced to be eſtabliſhed; yet even in theſe
" unfavourable circumſtances, it flouriſhed with an uncommon degree of luxuriance, and yielded as tender and
" ſucculent, though not ſuch abundant ſhoots, which aſſumed as fine a verdure as if they had been reared in
" the richeſt manured fields. I have likewiſe ſeen it in dry and barren ſands, where almoſt no other plant
" could be made to live; and there alſo it ſends out ſuch a number of healthy ſhoots all round, as covers the
" earth with the cloſeſt and moſt beautiful carpet that can be deſired.

" The ſtalks of this plant, as has been ſaid, are weak and ſlender, ſo that they ſpread upon the ſurface of
" the ground, unleſs they are ſupported by ſome other vegetable. In ordinary ſoils, they do not grow to a
" great length, nor produce a great many flowers,—branch out a good deal, but carry few or no flowers or
" ſeeds: and as I firſt took notice of it only on poor ſoils, it was purely with a view to paſture that I firſt
" reſolved to cultivate it; and with this intention ſowed it with my ordinary hay-ſeeds, expecting no material
" benefit from it till I deſiſted from cutting my field; but found myſelf agreeably diſappointed, as it grew
" the firſt ſeaſon as tall as my great clover, and formed the fineſt hay I ever ſaw; it being ſcarce diſtinguiſh-
" able from Lucerne, but by the ſlenderneſs of the ſtalk and proportional ſmallneſs of the leaf.

" It is nearly allied to Lucerne in its botanical characters; and reſembles that valuable plant in many other
" reſpects. Like it, it is perennial,—ſends down a long root to a great depth in the ſoil, which is at firſt ſmall,
" and gradually increaſes with age, till it at length becomes of a very conſiderable ſize; ſo that it is ſeveral years
" after it is firſt ſowed before it attains its full perfection: but when it is once eſtabliſhed, it probably remains
" there for a prodigious number of years in full vigour, and produces annually a great quantity of fodder.
" In autumn 1773, I cut the ſtalk from an old plant of it that grew in very indifferent ſoil; and after having
" dried it thoroughly, found that it weighed fourteen ounces and a half. Like Lucerne, it is never affected
" with the ſevereſt droughts that we experience: but it does not reſemble it in delicateneſs of conſtitution, as
" it thrives in the ſtiffeſt clays, and is able to ſtand its ground among graſs or any other weeds.

" As this plant only produces ſeeds in abundance upon poor hungry ſoils that could hardly afford nouriſhment
" to any other, and as the ſtalks ſpread out cloſe upon the ſurface of the ground, it ſeems to me, that the greateſt
" bar to the cultivating thereof, will be the difficulty of obtaining the ſeeds in abundance; as in theſe circum-
" ſtances they muſt always be gathered by the hand: but as it is an abiding plant, thoſe who have ſuch ſoils
" as moſt ſtand in need of having plants of this ſort ſowed upon them, may be at a little trouble and expence
" to get them once *properly* laid down with this graſs, as it will be only once that they need do it. But it is
" poſſible, that future experience may diſcover ſome eaſier way of procuring the ſeeds than hath as yet occurred
" to me.

" The ſtalks of this plant die down entirely in winter, and do not come up in the ſpring till the ſame time
" that clover begins to advance; ſo that it can never be of uſe but as a ſummer paſture:—Neither does
" it advance very faſt after it is cut down, or eat over even in ſummer.—But the great cloſeneſs of the ſhoots
" may probably counterbalance that defect."

Whether this plant be deſerving of the encomiums here beſtowed on it, the practical farmer muſt determine. There appears no reaſon why ſeed might not be obtained from it, as well as from any of the other papilionaceous plants; and it ſhould ſeem, that thoſe ſorts of land which are not rich enough to bear Clover and other ſtrong growing plants, might be much improved by the introduction of the Birds-foot Trefoil.

In wet and boggy ſituations this plant grows much taller and becomes very hairy.

The inſect called by LINNÆUS *Thrips glauca*, ſometimes renders the flowers tumid and monſtrous. *Lightf. Fl. Scot.*

VERONICA HEDERÆFOLIA. IVY-LEAVED SPEEDWELL.

VERONICA *Lin. Gen. Pl.* DIANDRIA MONOGYNIA.

Cor. Limbo 4-partito, laciniâ infimâ, anguſtiore. *Capſula* bilocularis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

VERONICA *hederæfolia*, floribus ſolitariis, foliis cordatis planis quinquelobis. *Lin. Syſt. Vegetab. p.* 58. *Spec. Plant. p.* 19. *Flor. Suecic. p.* 7.

VERONICA caule procumbente; foliis lobatis, petiolis paucifloris. *Haller Hiſt. Helv. n.* 550.

VERONICA *hederæfolia*. *Scopoli. Fl. Carniol. p.* 21.

ALSINE Hederulæ folio. *Bauh. Pin.* 250.

ALSINE Hederulæ folio minor. *Parkinſ.* 760.

ALSINE hederacea. *Ger. emac.* 616.

VERONICA floſculis ſingularibus, Hederulæ folio, Morſus Gallinæ minor dicta. Ivy-leaved Speedwell, or ſmall Henbit, *Raii Syn. p.* 280.

Hudſon Fl. Angl. p. 6.

Lightfoot Fl. Scot. p. 76.

RADIX annua, parva, fibroſa.

ROOT annual, ſmall, and fibrous.

CAULIS decumbens, ſubramoſus, teres, craſſiuſculus, tener, pilis mollibus veſtitus, viticulis alſines inſtar geniculatus.

STALK decumbent, ſomewhat branched, round, thickiſh, tender, covered with ſoft hairs, and ſtringy withinſide like Chickweed.

FOLIA alterna, petiolata, ſubcordata, trilobata aut quinquelobata, ſubcarnoſa, utrinque hirſuta, quinquenervia.

LEAVES alternate, ſtanding on foot-ſtalks, ſomewhat heart-ſhaped, with three or five lobes, a little fleſhy, and hirſute on each ſide.

PEDUNCULI uniflori, axillares, demum reflexi.

FLOWER-STALKS, each ſupporting one flower, proceeding from the boſoms of the leaves, finally bending downward.

CALYX: PERIANTHIUM tetraphyllum, foliolis magnis, cordatis, acutis, ciliatis, *fig.* 1.

CALYX: a PERIANTHIUM of four leaves, which are large, heart-ſhaped, pointed, and edged with hairs, *fig.* 1.

COROLLA monopetala, rotata, pallide cœrulea, laciniis ovatis, infimâ anguſtiore, *fig.* 2, calyce brevioribus; faux intus villoſa, *fig.* 3.

COROLLA, of one PETAL, wheel-ſhaped, pale blue, the ſegments oval, the lower one narroweſt, *fig.* 2. ſhorter than the calyx; the mouth villous within, *fig.* 3.

STAMINA: FILAMENTA duo, alba: ANTHERÆ cœruleſcentes, *fig.* 4, 5, 6.

STAMINA: two white FILAMENTS: ANTHERÆ blueiſh, *fig.* 4, 5, 6.

PISTILLUM: GERMEN ſubrotundum: STYLUS filiformis, albus: STIGMA craſſum, album, *fig.* 7.

PISTILLUM: GERMEN roundiſh: STYLE thread-ſhaped and white: STIGMA thick and white. *fig.* 7.

PERICARPIUM: CAPSULA magna, obcordata, ſubrotunda, bilocularis, *fig.* 8.

SEED-VESSEL: a CAPSULE, large, ſomewhat inverſely heart-ſhaped, roundiſh, with two cavities, *fig.* 8.

SEMINA duo in ſingulo loculamento, magna, nectario Cypripedii haud diſſimilia, pallide fuſca, intus concava, umbilicata, *fig.* 9, 10, 11.

SEEDS two in each cavity, large, in form not unlike the Nectary of the Ladies Slipper, of a pale brown, hollow within, with a navel-like appearance, externally convex, and grooved or notched, *fig.* 9, 10, 11.

The *Veronica hederæfolia* appears to be a very general plant throughout Europe.

Of our Engliſh *Speedwells*, it has the greateſt affinity to the *Veronica agreſtis*, as well in its habit and place of growth, as in the peculiar formation of its ſeed-veſſels and ſeeds: but although its ſeed-veſſels are nearly of the ſame ſize, yet its ſeeds are conſiderably larger: in the one, we ſcarce ever obſerve more than four, and often but two; in the other we generally find eight or more; hence we are able to account for the remarkable large ſeed-leaves which occur in this ſpecies. The *hederæfolia* differs alſo from the *agreſtis* in ſeveral other reſpects; the leaves are more thinly placed on the ſtalks, and have ſeldom more than two or four notches in them; and the flowers are of a very pale blue colour.

Like the *agreſtis*, it grows in gardens and corn-fields, particularly in the latter, when the ſoil is light, in great abundance, and flowers in April. Its ſeeds are ripe the latter-end of May.

The farmer may conſider it as an harmleſs annual. Its virtues, if any, remain as yet undiſcovered.



Veronica hederifolia

Sansom Sculp


Oxalis acetosella
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ACETOSELLA. WOOD-SORREL.

OXALIS *Linnæi Gen. Pl.* DECANDRIA PENTAGYNIA.

Cal. 5-phyllus. *Petala* unguibus connexa. *Capſ.* angulis dehiſcens, 5-gona.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

OXALIS *Acetoſella* ſcapo unifloro, foliis ternatis obcordatis, radice dentata. *Linnæi Syſt. Vegetab. p.* 360. *Sp. Pl. p.* 620. *Fl. Suecic. n.* 406.

OXYS ſcapo unifloro, foliis ternatis, radice ſquamoſo-articulata. *Haller. hiſt. p.* 402.

OXYS *Acetoſella. Scopoli Fl. Carniol. n.* 561.

TRIFOLIUM acetoſum vulgare. *Bauhin Pin.* 330. *Parkinſon*, 746.

OXYS alba. *Ger. emac.* 1201.

ACETOSELLA et Lujula ſeu Alleluja *Offic. Raii Syn. p.* * 281, Wood-Sorrel.

Hudſon Fl. Angl. p. 173.

Lightfoot Fl. Scot. p. 238.

RADIX perennis, horizontalis, ſquamoſo-dentata, ruberrima.

FOLIA terna, obcordata, ex flavo-vireſcentia, ſubtus ſæpe purpurea, pilis raris adſperſa, petiolis longis inſidentia.

PETIOLI palmares, erectiuſculi, teneri, e bulbillo vaginante prodeuntes, ad baſin ruberrimi, teretes, ſuperne ad unum latus ſulcati.

FLORES albi aut carnei, venis rubris eleganter ſtriati.

SCAPI uniflori, longitudine foliorum, bractæis duabus ovato-acutis vaginantibus prope apicem inſtructi.

CALYX: PERIANTHIUM quinquepartitum, breve, perſiſtens, maculis purpureis ſæpe notatum, laciniis obtuſiuſculis margine membranaceis, *fig.* 1.

COROLLA: PETALA quinque, unguibus paululum incurvatis receptaculo affixa, et paulo ſupra ungues cohærentia, obtuſa, ſubcrenata, baſi flavedine tincta, *fig.* 2.

STAMINA: FILAMENTA decem, erecta, alba, quinque exteriora breviora, *fig.* 3, 4: ANTHERÆ flaveſcentes, biloculares, *fig.* 5.

PISTILLUM: GERMEN quinquangulare, viride: STYLI quinque capillares, ſtaminibus paulo longiores: STIGMATA obtuſa, *fig.* 6, 7.

PERICARPIUM: CAPSULA ſubovata, pentagona, maculata, quinquelocularis, angulis longitudinaliter dehiſcentibus, *fig.* 8, 8.

SEMINA: tria in ſingulo loculamento, cordata, per longitudinem ſtriata, utrinque convexa, rufa, ARILLO nitido albo elaſtico incluſa, quo diſrupto ejiciuntur, *fig.* 9, 9.

ROOT perennial, horizontal, ſcaly, and of a bright red colour.

LEAVES growing three together, inverſely heart-ſhaped, of a yellowiſh green colour, frequently purple underneath, beſet with a few hairs, and ſitting on long foot-ſtalks.

LEAF-STALKS about three inches long, nearly upright, tender, proceeding from a little bulb which forms a kind of ſheath to it; at bottom very red and round; the upper part grooved on one ſide.

FLOWERS white or fleſh-coloured, and elegantly ſtreaked with red veins.

FLOWER-STALK, ſupporting a ſingle bloſſom, the length of the leaves, furniſhed near the top with two oval pointed Bracteæ, which partly ſurround it.

CALYX: a PERIANTHIUM deeply divided into five ſegments, ſhort and permanent, often ſpotted with purple; the ſegments bluntiſh, and membranous at the edges, *fig.* 1.

COROLLA: five PETALS, affixed to the receptacle by the claws, which bend a little inward, juſt above the claws adhering together, blunt, ſlightly crenated, and tinged at bottom with yellow, *fig.* 2.

STAMINA: ten FILAMENTS, upright and white, the five exterior ones ſhorteſt, *fig.* 3, 4; ANTHERÆ yellowiſh, and bilocular, *fig.* 5.

PISTILLUM: a GERMEN, four cornered and green: STYLES five, very ſlender, and a little longer than the Stamina: STIGMATA blunt, *fig.* 6, 7.

SEED-VESSEL: a CAPSULE ſomewhat oval, five cornered, ſpotted, with five cavities, the angles burſting longitudinally, *fig.* 8, 8.

SEEDS: three in each cavity, heart-ſhaped, and grooved longitudinally, convex on both ſides, of a bright reddiſh brown colour, and encloſed within a ſhining white elaſtic ARILLUS, which burſting, they are thrown out, *fig.* 9, 9.

In this little plant, there is a delicacy of ſtructure ſuperior to what we obſerve in moſt: there are ſome circumſtances alſo in the œconomy of the plant not leſs worthy our attention; and which, I believe, have not hitherto been noticed. The firſt of theſe is the ſame proceſs, with reſpect to the plants ſeeding, which we obſerve in the violets. If this plant be attentively obſerved, it will be found to continue producing ſeed-veſſels and ſeeds, during the greateſt part of the ſummer, without any appearance of expanded bloſſoms, which are only obſervable at one particular ſeaſon of the year. As ſoon as the plant has done flowering, the flower-ſtalk, as in many other plants, bends down; and when the ſeed is ripe, again becomes upright. The ſecond is, if theſe ſeed-veſſels, when ripe, are ſlightly preſſed, they open at the angles, and the ſeeds are thrown out at the apertures; but not from any elaſticity in the capſule itſelf, which continues unchanged: but the cauſe of their propulſion is a ſtrong white ſhining arillus, which covers the ſeed, and which burſting, by its elaſticity throws the ſeeds to a conſiderable diſtance.

There are but few woods about us in which the *Wood-Sorrel* does not occur. It will not grow in a garden unleſs it has ſhade.

April and May are the months in which it flowers.

It is ſaid to vary with blueiſh and purple-coloured bloſſoms.

The leaves in wet weather, are expanded; but in dry weather they droop; *Linnæi Fl. Suecic.* They are alſo ſaid, by ſome authors, to manifeſt a degree of ſenſibility on being ſtruck. Poſſeſſing a very grateful acid taſte, ſuperior to common Sorrel, they have been uſed as an antiſeptic medicine, in malignant fevers, the ſcurvy, and all thoſe diſeaſes in which acids are indicated. The only form at preſent in uſe, is a conſerve of the leaves: but the ſyrup, infuſion, and juice of the leaves, and the leaves themſelves, have been uſed indifferently.

The eſſential ſalt, extracted from it by cryſtallization, is made uſe of for taking out iron moulds and ſpots of ink from linen: for this purpoſe, the ſtained part is dipped in water, ſprinkled with a little of the powdered ſalt, then rubbed on a pewter plate, after which the ſpot is waſhed out with warm water; *Newman's Chem.* by *Lewis.*

Twenty pounds of freſh Sorrel leaves yielded ſix pounds of juice; from which were obtained two ounces, two drams, and one ſcruple of cryſtalline ſalt; *ibid.*

According to experiments made by Dr. *Lobb*, a piece of human calculus was diſſolved in the juice of this plant in nine days; *Rutty's Mat. Med.*

ARUM MACULATUM. CUCKOW-PINT.

ARUM *Linnæi Gen. Pl.* GYNANDRIA POLYANDRIA.

Spatha monophylla, cucullata, *Spadix* ſupra nudus, inferne femineus, medio ſtamineus.

Raii Syn. Ger. 16. HERBÆ BACCIFERÆ.

ARUM *maculatum* acaule, foliis haſtatis integerrimis, ſpadice clavato. *Lin. Syſt. Vegetab. p.* 690.

ARUM foliis ſagittatis; ſpatha recta: clava cylindrica. *Haller. hiſt. helv. n.* 1302.

ARUM *maculatum*. *Scopoli Fl. Carniol. n.* 1138.

ARUM vulgare maculatum. *Bauhin Pin.* 195.

ARUM vulgare. *Gerard emac.* 834.

ARUM maculatum et non maculatum. *Park.* 373. *Raii Syn. p.* 266, Wake-Robin, Cuckow-Pint. *Hudſon. Fl. Ang. p.* 342. *Lightfoot Fl. Scot. p.* 528.

RADIX perennis, tuberoſa, albida, magnitudine nucis myriſticæ majoris, tranſverſa, fibras plurimas, ſimplices undique in terram demittente, ſapore acerrimo, tuberculis e lateribus egerminantibus ſe propagante.

FOLIA: ex una radice duo tria vel quatuor, rarius plura exeunt, ſagittata, petiolata, nitida, venoſa, venis intra marginem terminatis, maculis purpureis ſæpe notata.

PETIOLI baſi vaginantes, ſubtriquetri, externe convexi, interne canaliculati.

FRUCTIFICATIO ſpathâ incluſa.

CALYX: Spatha monophylla, maxima, oblonga, baſi convoluta, apice connivens, ventre compreſſa; *Spadix* clavatus, ſimpliciſſimus, ſpathâ paulo brevior, purpureus aut albidus, inferne germinibus obvallatus, marceſcens ſupra germina, *fig.* 4.

COROLLA nulla.

STAMINA: FILAMENTA nulla: ANTHERÆ plurimæ, ſeſſiles, tetragonæ, purpureæ, ſpadici adnatæ, *fig.* 1.

NECTARIA corpuſcula plurima, baſi craſſa, deſinentia in cirrhos filiformes ſupra et infra ſtamina, *fig.* 3.

PISTILLUM: GERMINA plurima, baſin ſpadicis veſtientia, infra ſtamina collocata, obovata: STYLI nulli: STIGMATA villis barbata, *fig.* 2.

PERICARPIUM: BACCÆ totidem, coccineæ, globoſæ, uniloculares, *fig.* 5.

SEMINA plurima, ſubrotunda.

ROOT perennial, tuberous, whitiſh, about the ſize of a large nutmeg, growing tranſverſely, ſending forth on every ſide a great number of ſingle fibres, of a moſt biting taſte, propagating itſelf by little tubercles, ſpringing from its ſide.

LEAVES: from one root to three or four, ſeldom more proceed, arrow-ſhaped, ſtanding on foot-ſtalks, ſhining, veiny, the veins terminating within the margin, often marked with purple ſpots.

LEAF-STALKS at bottom forming a ſheath, three-cornered, externally convex, internally channelled.

FRUCTIFICATION encloſed in a ſheath.

CALYX: a *ſheath* of one leaf, very large, oblong, the edges wrapping over each other at bottom, at top cloſing, the middle part compreſſed, the tongue club-ſhaped, ſingle, ſhorter than the ſheath, purple or of a whitiſh colour, below ſurrounded by the germina, and withering above them.

COROLLA wanting.

STAMINA: FILAMENTS wanting: ANTHERÆ numerous, ſeſſile, four cornered, purple, growing to the tongue, *fig.* 1.

NECTARIES ſeveral roundiſh bodies, terminated by a tapering thread, placed above and beneath the ſtamina, *fig.* 3.

PISTILLUM: GERMINA numerous, ſurrounding the baſe of the ſpadix or tongue, of an oval ſhape, placed beneath the ſtamina: STYLES wanting: STIGMATA bearded with little hairs, *fig.* 2.

BERRIES correſponding in number with the germina, ſcarlet, round, of one cavity, *fig.* 5.

SEED numerous and roundiſh.

Botaniſts who have noticed the hiſtory of this plant, well know that it appears under two very different forms in the ſpring and autumn: but the generality of people are not aware, that the naked cluſter of ſcarlet berries, ſo conſpicuous in the hedges at the cloſe of the ſummer, is the produce of what are uſually called *Lords and Ladies*, which attract the notice of children in the ſpring, and which are obſervable under moſt ſhady hedges,

The leaves of the *Cuckow-Pint* are ſubject to vary very much in their ſhape, and often appear ſpotted with purple, as ſometimes does the ſheath: the tongue within the ſheath varies alſo much in its colour, from a yellowiſh green to a fine purple.

All authors agree, that the root of the *Arum*, in its recent ſtate, is extremely acrimonious; but they in general agree, that it loſes its biting quality when dried, and with it its medicinal powers.

MILLER obſerves, that theſe roots are generally gathered in the ſpring, when the leaves are in full vigour, ſo that the roots ſhrink, and ſoon loſe their pungent quality; but thoſe which are taken up when the leaves decay, will continue good a whole year, and retain their pungency the ſame as when firſt taken up; *Gard. Dict.* 4*to. ed.* 5. The ſame mode is recommended by BERGIUS, in his *Mat. Med.*

When dried and powdered, they become eatable, and afford nouriſhment ſomewhat ſimilar to ſago or ſalop.

The diſtilled water of the root, as alſo a powder prepared by drying its juice, have been in uſe as coſmetics. The root alſo, like that of the Sopewort, has been occaſionally ſubſtituted for ſope; *Ray, Rutty.*

Many of the *Arums* have mild roots, which are eaten by the inhabitants of all the hot countries, where they grow naturally: and ſome of the ſorts are cultivated by the inhabitants of the ſugar colonies as eſculent plants; the leaves of one of the ſpecies of them, called *Indian Kale*, are boiled, and ſupply the want of other greens; *Miller's Gard. Dict.*

The berries are equally acrimonious with the roots; *Scopoli.*

When ſtimulating medicines are proper, which at the ſame time increaſe the ſecretions, as in ſome ſpecies of aſthma and dropſy, the *Arum* may probably be found ſerviceable: at preſent however it is not much in uſe.

If my memory does not deceive me, the roots in the woods are eaten by divers Birds, notwithſtanding their pungency, particularly the Pheaſant.



Arum maculatum

Samsom Sculp



Fumaria officinalis

FUMARIA OFFICINALIS. COMMON FUMITORY.

FUMARIA *Linnæi. Gen. Pl.* DIADELPHIA HEXANDRIA.

Cal. diphyllus, *Cor.* ringens. *Filamenta* 2, membranacea, singula *Antheris* 3.

Raii Syn. Gen. 10. HERBÆ FLORE PERFECTO SIMPLICI, SEMINIBUS NUDIS SOLITARIIS SEU AD SINGULOS FLORES SINGULIS.

FUMARIA *officinalis* pericarpiis monospermis racemosis, caule diffuso. *Linnæi. Syst. Vegetab. p.* 430. *Sp. Pl. p.* 984. *Fl. Suecic. p.* 245.

FUMARIA foliis multifidis lobis subrotunde lanceolatis; fructibus monospermis. *Haller. hist. helv. n.* 346.

FUMARIA *officinalis. Scopoli Fl. Carniol. p.* 47.

FUMARIA officinarum et Dioscoridis. *Bauhin Pin.* 143.

FUMARIA purpurea. *Gerard emac.* 1088.

FUMARIA vulgaris. *Parkinson*, 287. *Raii Syn. p.* 284, Fumitory. *Hudson Fl. Ang. p.* 270. *Lightfoot Fl. Scot. p.* 379.

RADIX annua, fibrosa, ex flavo-fusca.

CAULES dodrantales aut cubitales, diffusi, anguloſi, geniculis tumidis, ramosi, glabri, teneri, subflexuosi.

FOLIA alterna, petiolata, duplicato-pinnata, glauca, pinnulis trilobatis, mucronatis, lobis extimis bifidis aut trifidis.

FLORES racemosi, purpurei, racemi erecti, multiflori, floribus sparsis, pedunculatis, pedunculis clavatis.

BRACTEÆ lanceolatæ, apice purpureæ, singulo pedunculo subjectæ, *fig.* 1.

CALYX: PERIANTHIUM diphyllum; foliolis oppositis, æqualibus, lateralibus, acutis, denticulatis, deciduis, *fig.* 2, 3.

COROLLA oblonga, ringens, palato prominente faucem claudente. *Labium superius* apice dilatatum carinatum, subtus concavum, margine paululum reflexâ, basi obtusâ, incurvatâ. *Labium inferius* longitudine labii superioris et simile quoad apicem, cæteroquin lineare, basi paulo latiore. *Petala lateralia* sive alæ apice cohærent faucemque tetragonam efformant supra infraque tridentatam, *fig.* 4, 5, 6, 7.

STAMINA: FILAMENTA duo, alba, membranacea, basi lata, germen amplectentia: ANTHERÆ tres, flavescentes in singulo filamento, terminales, *fig.* 8.

PISTILLUM: GERMEN ovatum: STYLUS filiformis longitudine staminum, adscendens: STIGMA compressum, villosum, *fig.* 9.

PERICARPIUM Silicula unilocularis, subcordata, *fig.* 10.

SEMEN unicum, subrotundum, *fig.* 11.

ROOT annual, fibrous, of a yellowish brown colour.

STALKS from nine to seventeen inches in height, spreading, angular, enlarged at the joints, branched, smooth, tender, and somewhat bending.

LEAVES alternate, standing on foot-stalks, twice pinnated, of a blueish green colour, the pinnulæ or little leaves trilobate, terminating in a short point, the uttermost lobes bifid or trifid.

FLOWERS growing in a kind of spike, of a purple colour; spikes upright, supporting many flowers, which are placed, without any regular order, on foot-stalks, thickest at the extremity.

FLORAR-LEAF lanceolate, and purple at top, placed under each flower stalk, *fig.* 1.

CALYX: a PERIANTHIUM of two leaves, the leaves opposite, equal, lateral, pointed, with little teeth at the edges, and deciduous, *fig.* 2, 3.

COROLLA oblong, ringent, the palate prominent, and closing the mouth: *upper lip* dilated at the tip, keel-shaped, hollow beneath, the margin turning a little upwards; the base obtuse, and curled inward: the *lower lip* the same length as the upper one, and similar as to the top, in other respects linear; the base a little broader: the *lateral Petals*, or wings, cohere at top, and form a four corner'd mouth, in which there are three divisions on the upper and lower part, *fig.* 4, 5, 6, 7.

STAMINA: two white FILAMENTS, membranous, broad at bottom, and embracing the germen: ANTHERÆ three, of a yellowish colour, sitting on the tops of the filaments, *fig.* 8.

PISTILLUM: GERMEN oval: STYLE thread-shaped, the length of the stamina, rising upwards: STIGMA compressed, and villous, *fig.* 9.

SEED-VESSEL a small Pod of one cavity, somewhat inversely heart-shaped, *fig.* 10.

SEED one, of a roundish figure, *fig.* 11.

Fumitory in its flower and fruit, has certainly a considerable affinity with the papilionaceous plants, although that affinity is not very obvious at first sight: and, at the same time, some parts of its structure seem altogether peculiar to itself. The posterior part of the corolla terminates in a kind of nectarium, like what we observe in the Violet. But the part in which it differs most from the papilionaceous flowers, is its calyx, which consists of two small lateral leaves, more like stipulæ than a calyx. The filaments, as in papilionaceous flowers, are distinctly divided into two bodies, on the top of each of which, in a very singular manner, are placed three antheræ, each standing on a little footstalk. The seed-vessel in this species, has not much resemblance to those of the papilionaceous tribe; but in some of the other species it has a very considerable one, as in the *Claviculata*. This difference of structure in the seed-vessels, caused RAY to divide the plants of this genus, and place them in different classes: but by LINNÆUS they are classed together with the diadelphous plants.

When this plant grows luxuriantly, and near other plants, the leaves acquire a power of acting as tendrils, and supporting the plant: this is the principal variety to which it is subject.

It grows very commonly in corn-fields, gardens, and on the sides of banks; flowering from April to July.

The juice of it given to two ounces, with whey, gently opens the body, purifies (as it is called) the blood, resists the scurvy, removes eruptions of the skin, and a too great redness of the face, if exercise in the spring be joined with it. The extract, or inspissated juice of it, appears to be the most eligible form, of which one dram loosens the belly; *Haller. hist. helv. p.* 150.

Kine and Sheep eat it; Goats not readily; Horses and Swine not at all.

GEUM URBANUM. COMMON AVENS.

GEUM *Linnæi Gen. Pl.* ICOSANDRIA POLYGYNIA.

Cal. 10-fidus. *Petala* 5. *Sem.* ariſta geniculata.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

GEUM *urbanum* floribus erectis, fructibus globoſis villoſis: ariſtis uncinatis nudis, foliis lyratis. *Linnæi Syſt. Vegetab. p.* 399. *Sp. Pl. p.* 716. *Fl. Suecic. p.* 179.

GEUM foliis pinnatis, pinna ultima trilobata; floribus patulis, tubis aduncis. *Haller hiſt. n.* 1130.

CARYOPHYLLATA urbana. *Scopoli Fl. Carniol. p.* 364.

CARYOPHYLLATA vulgaris. *Bauhin Pin.* 321.

CARYOPHYLLATA *Gerard emac.* 995. *Parkinſon* 136.

Raii Syn. Avens, Herb Bennet.

Hudſon Fl. Angl. p. 198.

Lightfoot Fl. Scot. p. 273.

RADIX perennis, fibroſa, fuſca, ſapore et odore aromatico Caryophyllorum.

ROOT perennial, fibrous, of a brown colour, with the aromatic taſte and ſmell of Cloves.

CAULES plures, pedales aut bipedales, ſuberecti, parum flexuoſi, ſubanguloſi, hirſutuli, ramoſi.

STALKS ſeveral, from one to two feet high, nearly upright, a little crooked, ſlightly angular, hairy, and branched.

FOLIA radicalia admodum variantia, plerumque vero pinnata, petiolata, vagina petiolorum ciliata, pinnâ extimâ magnâ, trilobatâ aut tripartitâ pinnis lateralibus paucis, parvis, inæqualibus, omnibus inciſo-ſerratis, venoſis, hirſutulis, caulina tripartita aut terna.

LEAVES: radical leaves varying very much, moſt commonly pinnated, and ſtanding on a foot-ſtalk, the ſheath of which is edged with hairs, the outermoſt leaf or pinna large, divided a little way down the leaf, or nearly to the baſe; the lateral leaves few, ſmall and unequal, all of them deeply ſerrated, veined, and hairy; the leaves of the ſtalk deeply divided into three ſegments, or entire leaves.

STIPULÆ duæ, magnæ, ſubrotundæ, foliis ſimiles.

STIPULÆ two, large, of a roundiſh figure like the leaves.

PEDUNCULI ſolitarii, ſuberecti, teretes, hirſutuli.

FLOWER-STALKS ſingle, nearly upright, round and hairy.

CALYX: PERIANTHIUM monophyllum, decemfidum, patens, laciniis alternis minimis, acutis, hirſutis, demum reflexis; laciniis majoribus interne villoſis, margine craſſis, *fig.* 1.

CALYX: a PERIANTHIUM of one leaf, divided into ten ſegments, and ſpreading; the alternate ſegments very minute, pointed, hirſute, finally turning back: the larger ſegments villous on the inſide, and thick at the edge, *fig.* 1.

COROLLA: PETALA quinque rotunda, flava, longitudine calycis, remota, unguibus breviſſimis, *fig.* 2.

COROLLA: five roundiſh yellow PETALS, the length of the Calyx, at a little diſtance from each other, having very ſhort claws, *fig.* 2.

STAMINA: FILAMENTA plurima, flaveſcentia, ſubulata, calyci affixa, primum inflexa, demum erecta: ANTHERÆ ſubrotundæ, flavæ, demum fuſcæ, *fig.* 3, 4.

STAMINA: FILAMENTS numerous, of a yellowiſh colour, tapering, affixed to the Calyx, at firſt bending inward, laſtly becoming upright: ANTHERÆ roundiſh, of a yellow colour, finally brown, *fig.* 3, 4.

PISTILLUM: GERMINA numeroſa, in capitulum collecta, piloſa: STYLUS medio geniculatus, apice paululum incraſſato: STIGMA ſimplex, *fig.* 5.

PISTILLUM: GERMINA numerous, collected into a head, hairy: STYLE jointed in the middle, a little thickened at top: STIGMA ſimple, *fig.* 5.

SEMINA numeroſa, compreſſa, hiſpida, Stylo longo geniculato ariſtata, *fig.* 6, receptaculo paleaceo inſidentia, *fig.* 7.

SEEDS numerous, flattened, hiſpid, terminated by a long Ariſta, crooked near the extremity, *fig.* 6, ſeated on a hairy receptacle, *fig.* 7.

The *Geum urbanum* is a very common plant with us, in woods and hedges, flowering from May to September.

The root poſſeſſes a degree of aſtringency, joined to an aromatic flavour like that of Cloves, whence its name of *Caryophyllata*.

Infuſed in beer, it renders it more fragrant, and prevents it from ſoon turning ſour. *Lin. Fl. Suecic.*

Chewed in the mouth, it takes off from a diſagreeable breath. *Rutty. Mat. Med.*

An infuſion of the root in water, given in malignant fevers, has been attended with bad effects, producing delirium: but an infuſion of the root in wine, ſtrengthens the ſtomach and bowels, and is ſerviceable in the diarrhœa and dyſentery, wounds, chronic diſeaſes ariſing from a laxity of fibre, and intermitting fevers. *Haller hiſt. p.* 53. *v.* 2.

The root is ſaid to poſſeſs the moſt virtue when it grows in a dry ſituation.

It is eaten by kine, goats, ſheep, and ſwine; but not readily by horſes.

It is diſtinguiſhed from our other *Geum* by its yellow flowers.



Geum urbanum.



Lamium amplexicaule

Sansom Sculp.

DEAD-NETTLE.

LAMIUM *Linnæi Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Corollæ lab. ſuper. integrum, fornicatum; lab. inf. 2-lobum; faux utrinque margine dentata.

Raii Syn. Gen. 14. Suffrutices et Herbæ verticillatæ.

LAMIUM *amplexicaule* foliis floralibus ſeſſilibus amplexicaulibus obtuſis. *Linnæi Syſt. Vegetab. p.* 446. *Spec. Plant. p.* 203. *Flor. Suecic. p.* 809.

LAMIUM foliis radicalibus petiolatis, lobatis, ſuperioribus caulem ambientibus, rotunde inciſis. *Haller. hiſt. n.* 273.

LAMIUM *amplexicaule. Scopoli Fl. Carniol. n.* 702.

LAMIUM folio caulem ambiente majus et minus. *Bauhin Pin.* 231.

ALSINE hederula altera. *Gerard. emac.* 616.

ALSINE hederula folio major. *Parkinſon* 762.

Raii Syn. p. 240. Great Henbit.

Hudſon Fl. Angl. p. 225.

Lightfoot Fl. Scot. p. 309.

RADIX annua, fibroſa, albida.

CAULES ex una radice plures, dodrantales, aut pedales, ſuberecti, quadrati, læves, ramis paucis oppoſitis.

FOLIA oppoſita, inferiora petiolata, ſubrotundo cordata, inciſo-crenata, venoſa, hirſutula, petiolis ſuperne concavis foliis longioribus, ſuperiora ſeſſilia, ſemiorbiculata, inciſa, laciniis obtuſiuſculis.

FLORES verticillati ad 15, duorum generum, manci ſcilicet et perfecti, manci breves, calycibus paulo longiores, apicibus ruberrimis hirſutis clauſis, *fig.* 1. 2; perfecti calyce quadruplo longiores, purpurei, e ſummitatibus caulium utplurimum erumpentes, *fig.* 3.

CALYX *in perfectis*, PERIANTHIUM quinquedentatum, tubuloſum, vix manifeſte ſtriatum, dentibus æqualibus, acuminatis, hirſutis, *fig.* 4.

COROLLA: TUBUS prælongus, cylindraceus, ſuberectus, faux inflata, margine reflexâ maculatâ, denticulis duobus notata, collum prominulum, labium ſuperius fornicatum, hirſutum, ſubintegrum; labium inferius deflexum, bilobum, maculis purpureis notatum, *fig.* 5, 6, 7, 8.

STAMINA: FILAMENTA quatuor, quorum duo longiora, alba, ſub labio ſuperiore: ANTHERÆ piloſæ, polline croceo refertæ, *fig.* 9.

PISTILLUM: GERMEN quadrifidum: STYLUS filiformis, longitudine et ſitu ſtaminum: STIGMA bifidum, acutum, *fig.* 10.

SEMINA quatuor in fundo calycis, appendiculata, punctis albis notata, *fig.* 11, 12.

ROOT annual, fibrous, and of a whitiſh colour.

STALKS, ſeveral from one root, nine inches or a foot high, nearly upright, ſquare, ſmooth, with a few oppoſite branches.

LEAVES oppoſite, the lower ones ſtanding on foot-ſtalks, of a roundiſh heart-ſhaped figure, deeply crenated, veiny, ſlightly hairy; the foot-ſtalks grooved on the upper part, and longer than the leaves; the upper ones ſemiorbicular, cut in at the edges, the ſegments ſomewhat blunt.

FLOWERS growing in whorls to 15, of two kinds, perfect and imperfect; the imperfect ones ſhort, a little longer than the Calyx, the tips very red, hairy, and cloſed, *fig.* 1, 2; the perfect ones four times the length of the Calyx, of a bright purple colour, and generally breaking out from the tops of the ſtalks *fig.* 3.

CALYX *in the perfect ones*, a PERIANTHIUM with five teeth, tubular, ſcarce manifeſtly ſtriated; the teeth equal, acuminated, and hirſute, *fig.* 4.

COROLLA: the TUBE very long, cylindrical, nearly upright, the mouth inflated, the edge turned back, ſpotted, and marked with two little teeth; the neck a little prominent; the upper lip arched, hirſute, and nearly entire; the lower lip turning down, having two lobes, which are ſpotted with purple. *fig.* 5, 6, 7, 8.

STAMINA: four FILAMENTS, two long and two ſhort, of a white colour, placed under the upper lip: ANTHERÆ hairy, filled with a ſaffron-coloured pollen, *fig.* 9.

PISTILLUM: GERMEN divided into four parts: STYLE filiform, of the ſame length and ſituation with the Stamina: STIGMA bifid and acute, *fig.* 10.

SEEDS four, in the bottom of the Calyx, with a little appendage to each, ſurface covered with white ſpots, *fig.* 11, 12.

In the flowering of this plant, there are ſome circumſtances well deſerving of attention.

Two kinds of bloſſoms are obſervable on it; the one a very ſmall ſhort one, like the rudiments of a flower, a little longer than the Calyx, with the mouth cloſed, very hairy, and of a bright red colour; the other a flower like that of the *Lamium purpureum*, but much longer.

The firſt of theſe bloſſoms, which, ſo far as reſpects the Corolla, are evidently imperfect, appear very early in the Spring, in February and March: the long and perfect bloſſoms do not make their appearance till May or June, when they are obſervable on the tops of the ſtalks: and if the progreſs of the flowers be watched, the Corolla will be found to be gradually enlarged in different bloſſoms, till the weather being ſufficiently warm, they come forth fully formed.

Thoſe who have attended to the changes of inſects, muſt have obſerved, that if a caterpillar has, previous to its changing into the chryſalis or pupa ſtate, been deprived of its proper quantity of food, the fly has come forth perfect in all its parts except the wings, which are crumpled up, and never expand; ſo this plant, for want of a ſufficient degree of warmth, is not able to puſh forth an expanded Corolla; yet being perfect in every other part, the ſpecies ſuffers no diminution.

I had for ſeveral years imagined, that the imperfect flowers were the rudiments of the long bloſſoms; but on a more minute inquiry, I found that they never grew any longer, but decayed. I was then ready to ſuppoſe that they were barren flowers; but on diſſecting them, I found that each had both Stamina and a Piſtillum.

Since the above obſervations were made, I find, on looking into the *Flora Suecica*, that LINNÆUS takes notice of its ſcarce ever producing perfect bloſſoms in *Sweden*.

Here then is a proceſs ſomewhat ſimilar to what we obſerve in the Violet and ſome other plants, where perfect ſeed is produced, although the Corolla be not perfectly formed.

It grows with us frequently on walls; and in the greateſt abundance in the fields and gardens about *Batterſea* and *Lambeth*, where the ſoil is light.

CHENOPODIUM POLYSPERMUM. ALL-SEED.

CHENOPODIUM *Linnæi Gen. Pl.* PENTANDRIA DIGYNIA.

Cal. 5-phyllus, 5-gonus. *Cor.* o. *Sem.* 1. lenticulare, ſuperum.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO (VEL APETALO POTIUS.)

CHENOPODIUM *Polyſpermum* foliis integerrimis ovatis, caule erecto, calycibus fructus patulis.

CHENOPODIUM *Polyſpermum* foliis integerrimis ovatis, caule decumbente, cymis dichotomis aphyllis axillaribus. *Lin. Syſt. Veg. p.* 216. *Spec. Plant. p.* 231. *Fl. Suecic. p.* 80.

CHENOPODIUM caule erecto, foliis ovatis integris. *Haller. Hiſt. Helv. p.* 266.

CHENOPODIUM *Polyſpermum. Scopoli. Fl. Carniol. n.* 279.

BLITUM polyſpermon a ſeminis copia. *Bauhin Pin.* 118.

Gerard. emac. 325.

Parkinſon, 753.

CHENOPODIUM Betæ folio. *Inſt. R. H.* 506.

Raii Syn. p. 157. Upright Blite, or All-ſeed.

Lightfoot Fl. Scot. p. 150.

Hudſon Fl. Angl. ed. 1. *p.* 92. *ed.* 2. *p.* 107.

RADIX annua, fibroſa, rubeſcens.

CAULIS plerumque ſuberectus, pedalis aut bipedalis, tetragonus, lævis; RAMI diffuſi, longiſſimi, cauli ſimiles.

FOLIA petiolata, ovata, integerrima, lævia, margine veniſque rubro ſæpe tinctis.

FLORES axillares, ſubcymoſi, Cymis dichotomis, aphyllis.

CALYX: PERIANTHIUM pentaphyllum, concavum, perſiſtens, laciniis ovatis, viridibus, *fig.* 1.

COROLLA nulla.

STAMINA: FILAMENTA quinque baſi latiora, alba, demiſſo polline Calyce longiora; ANTHERÆ ſubrotundæ, didymæ, flavæ, *fig.* 2.

PISTILLUM: GERMEN orbiculatum; STYLUS bipartitus, breviſſimus; STIGMATA obtuſa, *fig.* 3, 4.

PERICARPIUM nullum.

SEMEN orbiculatum, rufum, Calyci patulo innixum, non vero incluſum, *fig.* 5.

ROOT annual, fibrous, and reddiſh.

STALK in general nearly upright, about a foot or two in height, four-cornered and ſmooth; BRANCHES far extended, and like the ſtalk.

LEAVES ſtanding on foot-ſtalks, ovate, entire at the edges, ſmooth, the margin and veins often tinged with red.

FLOWERS axillary, forming a kind of Cyma, which divides into two at bottom, and is leafleſs.

CALYX: a PERIANTHIUM of five leaves, concave and permanent, the ſegments oval and green, *fig.* 1.

COROLLA wanting.

STAMINA: five FILAMENTS, broadeſt at the baſe, of a white colour; the Pollen being thrown out, they become longer than the Calyx: ANTHERÆ roundiſh, double, and yellow, *fig.* 2.

PISTILLUM: GERMEN orbicular: STYLE divided into two, very ſhort: STIGMATA blunt, *fig*, 3, 4.

SEED-VESSEL wanting.

SEED orbicular, reddiſh brown, ſupported by the Calyx, which ſpreads open, and does not cover it, *fig.* 5.

Although there are many of the *Chenopodiums* which are not to be diſtinguiſhed without much care and attention, yet ſome are very eaſily made out, of which number is the preſent ſpecies.

Its ſquare ſtalk, which is generally of a bright red colour, its long extended branches, and its reddiſh ſeeds, which are numerous and ſtrikingly viſible, from being only in part covered with the calyx, render this plant ſufficiently obvious.

It is not uncommon in gardens and on dunghills, flowers in July and Auguſt. To the gardener it is a troubleſome annual, but ſcarcely injurious to the farmer.

Fiſh are ſaid to be fond of it, *Lin. Fl. Suecic. ex Loes*, when thrown into fiſh ponds.



Chenopodium polyspermum



Medicago lupulina

2 7

MEDICAGO LUPULINA. HOP MEDICK.

MEDICAGO *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA.

Legumen compreſſum, cochleatum. *Carina* corollæ a vexillo deflectens.

Raii Syn. Gen. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

MEDICAGO *lupulina* ſpicis ovalibus, leguminibus reniformibus monoſpermis, caulibus procumbentibus.

Lin. Syſt. Vegetab. p. 577. *Flor. Suecic. n.* 678.

MEDICA caule diffuſo, capitulis hemiſphæricis, ſiliquis reniformibus. *Haller hiſt. No.* 380, *v.* 1.

MEDICA *lupulina. Scopoli Fl. Carniol. No.* 940.

TRIFOLIUM pratenſe luteum, capitulo breviore. *Bauhin Pin.* 328.

TRIFOLIUM luteum lupulinum. *Gerard. emac.* 1186. *Raii Syn.* 331. Meliot Trefoil.

TRIFOLIUM montanum lupulinum. *Parkinſon,* 1105.

Hudſon Fl. Angl. ed. 1. *p.* 282. *ed* 2. *p.* 330.

Lightfoot. Fl. Scot.

RADIX biennis, fuſiformis, paucis fibrillis inſtructa, profunde penetrans.

CAULES procumbentes, numeroſi, pedales, ſubanguloſi, hirſutuli, ramoſi.

FOLIA terna, obcordata, aut obovata, obtuſiuſculè dentata, mucrone brevi latâ terminata, mollia, pubeſcentia, averſâ præcipue parte.

STIPULÆ duæ, ovato-lanceolatæ, acuminatæ, denticulatæ.

SPICULÆ primum ſubrotundæ, poſtea ovales, apicibus ſubincurvatis, baſi ad unum latus nudis.

CALYX: PERIANTHIUM monophyllum, ſubpiloſum, quinquedentatum, dentibus inæqualibus, tribus inferioribus longioribus, duobus ſuperioribus brevioribus, remotis.

COROLLA lutea, parva, Calyce longior; VEXILLUM reflexum, emarginatum, inferne patens; ALÆ et CARINÆ minimæ, ſubæquales.

STAMINA: FILAMENTA connexa: ANTHERÆ luteæ.

PISTILLUM: GERMEN ſubovatum compreſſum: STYLUS longitudine Staminum, craſſum, ſurſum curvatum: STIGMA capitatum.

PERICARPIUM: LEGUMEN reniforme, compreſſum, rugoſum, nigrum, ſpiraliter cochleatum, ſubvilloſum, *fig.* 1.

SEMEN unicum, ovatum, læve, flaveſcens, *fig.* 2.

ROOT biennial, tapering, furniſhed with few fibres, and penetrating deep into the earth.

STALKS procumbent, numerous, about a foot long, ſomewhat angular, ſlightly hairy, and branched.

LEAVES growing three together, inverſely heart or egg-ſhaped, ſomewhat bluntly indented, terminated by a broad ſhort point, ſoft, pubeſcent, particularly on the under ſide.

STIPULÆ two, ovato-lanceolate, acuminated, notched with little teeth.

SPICULÆ, firſt roundiſh, afterwards oval, the tips ſomewhat incurvated, and naked at bottom on one ſide.

CALYX: a PERIANTHIUM of one leaf, ſomewhat hairy, having five teeth, which are unequal; the three lowermoſt longeſt; the two upper ones ſhorter, and remote from each other.

COROLLA yellow, ſmall, longer than the Calyx: STANDARD turning back, with a ſlight notch, ſpreading below: WINGS and KEEL very ſmall, and bending below.

STAMINA connected by the FILAMENTS: ANTHERÆ yellow.

PISTILLUM: GERMEN ſomewhat oval and flat: STYLE the length of the Stamina, thick, and bending upwards: STIGMA forming a little head.

SEED-VESSEL: a kidney-ſhaped LEGUMEN, flat, wrinkled, of a black colour, ſpirally twiſted, and ſlightly villous, *fig.* 1.

SEED ſingle, oval, ſmooth, and of a yellowiſh colour, *fig.* 2.

Many of our *Trefoils* bear a conſiderable affinity to each other, and the preſent plant is often confounded with ſome of them: but ſimilar as it may be in its leaves, its parts of fructification will always direct the ſtudent aright in his inveſtigation of it; its ſeed-veſſels in particular, being totally different from thoſe of the *Trefoils. Vid. fig.* 1, 2.

The leaves and ſtalks of this plant are frequently more hairy than thoſe *Trefoils* for which it is liable to be miſtaken, except the *ſubterraneum,* which is uſually ſmaller; and in general the more barren the ſoil in which this plant grows, the more downy does it appear: by culture it grows much larger and becomes ſmoother.

Its flowers are ſmaller and more cloſely compacted than thoſe of the *Trifolium agrarium* and *procumbens,* to both of which it bears a great ſimilarity; nor are the ſpikes ſo exactly round as in thoſe plants, but uſually of an oval, or oblong ſhape, particularly when ſomewhat advanced; and when the ſeeds are ripe, the plant is diſtinguiſhed, at firſt ſight, by its black ſeed-veſſels.

The *Hop Medick* has, of late years, been much cultivated in different parts of the kingdom; and in different counties, it has been diſtinguiſhed by different names, as thoſe of *Trefoil, Black Seed,* and *Non-ſuch.*

As the name of *Trefoil* tends to confound this plant with the true *Trefoils,* or GENUS *Trifolium,* I have ventured to call it *Hop Medick,* there being already a plant called *Hop Trefoil,* viz. *Trifolium agrarium,* which though not at preſent in culture, may perhaps be introduced at ſome future period.

The *Hop Medick* is often ſown by itſelf, and often with *Ray Graſs*; and though it does not produce ſo large a crop as the *Broad-leaved Clover,* it is ſuppoſed to afford a ſweeter one, and a food particularly adapted to Sheep.

Its natural ſituation is a dry one, and its ſoil ſandy, hence we find it wild on dry banks and on hilly paſtures, flowering in June and July. Its ſeed is ripe in Auguſt.

CONVOLVULUS ARVENSIS. FIELD CONVOLVULUS.

CONVOLVULUS *Linnæi Gen. Pl.* PENTANDRIA MONOGYNIA.

Cor. campanulata, plicata. *Stigm.* 2. *Caps.* 2-locularis: loculis diſpermis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

CONVOLVULUS *arvenſis* foliis ſagittatis utrinque acutis, pedunculis ſubunifloris. *Lin. Syſt. Veget. p.* 168. *Sp. Pl. p.* 218. *Flor. Suecic. p.* 64.

CONVOLVULUS foliis ſagittatis, lateſcentibus, petiolis unifloris, ſtipulis remotis ſagittatis. *Haller. hiſt. helv. n.* 664.

CONVOLVULUS *arvenſis. Scopoli Fl. Carn. n.* 219.

CONVOLVULUS minor arvenſis. *Bauhin. pin.* 294.

CONVOLVULUS minor vulgaris. *Parkinſon.* 171.

SMILAX lævis minor. *Gerard emac.* 861.

Raii Syn. p. 275, Small Bindweed.

Hudſon Fl. Angl. ed. 1. *p.* 74. *ed.* 2. *p.* 88.

Lightfoot Fl. Scot. p. 140.

Oeder Fl. Dan. icon. 459.

RADIX perennis, craſſitudinis pennæ coracis, teres, albida, lacteſcens, repens, vix extirpanda.

CAULES plurimi, tenues, tortuoſi, procumbentes, ramoſi, plantas vicinas contorquendo adſcendentes et ſæpe ſuffocantes.

FOLIA alterna, haſtata, lævia, poſtice acutè hamata.

PETIOLI foliis breviores, inferne convexi, ſuperne canaliculati.

PEDUNCULI uniflori, biflori aut triflori.

CALYX: PERIANTHIUM quinquepartitum, minimum, perſiſtens, foliolis ovatis, obtuſiuſculis, *fig.* 1.

COROLLA monopetala, campanulata, patens, plicata, albo et rubro eleganter picta, interdum penitus alba, *fig.* 2.

STAMINA: FILAMENTA quinque ſubulata, alba, Corollâ dimidio breviora: ANTHERÆ ſubſagittatæ, albæ, *fig.* 3.

PISTILLUM: GERMEN ſubrotundum, glandulâ cinctum: STYLUS filiformis, Staminibus paulo longior: STIGMATA duo, oblonga, latiuſcula, *fig.* 4, 5, 6.

PERICARPIUM: CAPSULA ſubrotunda, mucronata.

SEMINA anguloſa, fuſca.

ROOT perennial, the thickneſs of a crow quill, round, white, milky, creeping ſo as ſcarce to be eradicated.

STALKS numerous, ſlender, twiſted, procumbent, branched, twining round, and often ſuffocating the plants growing near them.

LEAVES alternate, haſtate, ſmooth, running out into two points behind.

LEAF-STALKS ſhorter than the leaves, on the lower part convex, on the upper part channeled.

FLOWER-STALKS ſupporting one, two, or three flowers.

CALYX: a PERIANTHIUM deeply divided into five ſegments, minute and permanent, the leaves oval and ſomewhat blunt, *fig.* 1.

COROLLA monopetalous, bell-ſhaped, ſpreading, plaited, elegantly painted with red and white, ſometimes wholly white.

STAMINA: five FILAMENTS, tapering, white, about half the length of the Corolla; ANTHERÆ ſomewhat arrow-ſhaped, and white. *fig.* 3.

PISTILLUM: GERMEN roundiſh, ſurrounded by a gland; STYLE filiform, a little longer than the Stamina; STIGMATA two, oblong, and broadiſh. *fig.* 4. 5. 6.

SEED-VESSEL: a roundiſh, pointed CAPSULE.

SEEDS angular, and brown.

BEAUTIFUL as this plant appears to the eye, experience proves it to have a moſt pernicious tendency in agriculture: the field of the ſlovenly farmer bears evident teſtimony of this; nor is the garden wholly exempt from its inroads.

The following experiment may ſerve to ſhow what precaution is neceſſary in the introduction of plants into a garden, eſpecially when we want them to grow in ſome particular ſituation.

Tempted by the lively appearance which I had often obſerved ſome banks to aſſume, from being covered with the bloſſoms of this *Convolvulus*, I planted twelve feet of a bank, in my garden, which was about four feet in height, with ſome roots of it: it was early in the ſpring, and the ſeaſon was remarkably dry, ſo that I ſcarce expected to ſee them grow; but a wet ſeaſon coming on, ſoon convinced me that my apprehenſions were unneceſſary, for they quickly covered the whole ſurface of the bank, to the almoſt total extirpation of every other plant. It being a generally received opinion, that if a plant was cut down cloſe to the ground, it would thereby be deſtroyed, or at leaſt very much weakened, I was determined to try the validity of this opinion by an experiment, and accordingly, the whole of the *Convolvulus* was cut down ſomewhat below the ſurface of the earth: in about a month, the bank was covered with it thicker than before. I then had recourſe to a ſecond cutting, and afterwards to a third, but all theſe were inſufficient; for now at this preſent writing (Auguſt) the bank is wholly covered with it; nor do I expect to deſtroy it, but by levelling the bank and deſtroying its roots.

This experiment ſeems to determine a matter of no ſmall conſequence in agriculture, viz. that the cutting down theſe plants which have creeping roots, rather tends to make them ſpread farther than deſtroy them; and that nothing ſhort of actual eradication, will effect the latter.

It is ſeldom that this plant is highly prejudicial to meadows, or paſtures; but many fields of corn are every year deſtroyed by it, or rendered of little value.

It flowers in June and July. The bloſſoms vary conſiderably in their colour, being ſometimes quite white, but moſt commonly painted more or leſs, with a lively red.

LINNÆUS's character of this plant, *pedunculis unifloris*, does not always hold good; the flower-ſtalks being frequently branched, and ſupporting two or three flowers.

The leaves ſometimes appear quite narrow, and the bloſſoms have been obſerved to be divided almoſt to the baſe, *vid. Ray's Synopſis, ed.* 3, *p.* 276.

Convolvulus arvensis





Atriplex hastata

ATRIPLEX HASTATA. SPEAR-LEAVED ORACH.

ATRIPLEX *Linnæi. Gen. Pl.* POLYGAMIA MONOECIA.

HERMAPHROD. *Cal.* 5-phyllus. *Cor.* 0. *Stam.* 5. *Stylus* 2-partitus. *Sem.* 1, depreſſum.

FEM. *Cal.* 2-phyllus. *Cor.* 0. *Stam.* 0. *Stylus* 2-partitus. *Sem.* 1, compreſſum.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO (VEL APETALO POTIUS.)

ATRIPLEX *haſtata* caule herbaceo, calycis valvulis femineis magnis deltoidibus ſinuatis. *Linnæi. Syſt. Vegetab. p.* 764. *Sp. pl.* 1494. *Fl. Suecic. n.* 921.

ATRIPLEX foliis triangularibus, baſi producta, valvulis triangularibus, ſubaſperis. *Haller hiſt. n.* 1617.

ATRIPLEX ſylveſtris folio haſtato ſeu deltoide. *Raii Syn. p.* 151, Wild Orache with a ſpear-pointed leaf.

Hudſon Fl. Angl. ed. 1. *p.* 337.

Lightfoot Fl. Scot. p. 636.

RADIX annua, ſimplex, fibroſa, albida.

CAULIS plerumque erectus, pedalis aut tripedalis, tetragonus, angulis obtuſis, lateribus ſubſulcatis, ad geniculos tumidiuſculus, lævis, purpuraſcens, ad baſin uſque, ramoſus; RAMI oppoſiti, inferiores longiſſimi, caulem ipſum interdum æquantes, utplurimum procumbentes.

FOLIA ima triangularia, margine plus minuſve dentata, farinâ ſubtus copioſe adſperſa, ſæpe vero penitus glabra, oppoſita, petiolata, ſuperiora ovato lanceolata, integerrima, alterna.

FLORES in ſummis caulibus et ramulis, in ſpicas anguſtas rubentes, digeſti.

Flos hermaphroditus ſterilis.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, concavis, marginibus membranaceis laceris, *fig.* 1.

COROLLA nulla.

STAMINA: FILAMENTA quinque, calyce paulo longiora: ANTHERÆ ſubrotundæ, didymæ, rubræ, *fig.* 3.

PISTILLUM: GERMEN in centro floſculi minimum ſterile.

Flos femineus.

CALYX: PERIANTHIUM diphyllum, foliolis ovato-acutis, erectis, granulis diaphanis obductis, *fig.* 2.

PISTILLUM: GERMEN ovatum, *fig.* 6: STYLI duo, etiam tres, filiformes, albi, *fig.* 4, 5.

PERICARPIUM nullum. *Calycis* valvæ magnæ, cordatæ, aſperæ, inter ſe includentes ſemen, *fig.* 7, 8.

SEMEN unicum, orbiculatum, compreſſum, *fig.* 9.

ROOT annual, ſimple, fibrous, and of a whitiſh colour.

STALK generally upright, from one to three feet in height, four cornered, the angles obtuſe, the ſides ſomewhat grooved, a little ſwelled at the joints, ſmooth, of a purpliſh colour, and branched quite to the bottom: the BRANCHES oppoſite; the lowermoſt very long, ſometimes almoſt equal with the ſtalk itſelf, and for the moſt part procumbent.

LEAVES on the lower part of the ſtalk triangular, with the edge more or leſs indented, ſprinkled plentifully on the under ſide with meal, ſometimes quite ſmooth, oppoſite, and ſtanding on foot-ſtalks; the upper leaves oval, pointed, intire, and alternate.

FLOWERS diſpoſed on the tops of the ſtalks and branches in narrow reddiſh ſpikes.

Hermaphrodite Flower ſterile.

CALYX: a PERIANTHIUM of five leaves, which are oval and concave, the edges membranous and jagged, *fig.* 1.

COROLLA wanting.

STAMINA: five FILAMENTS a little longer than the Calyx: ANTHERÆ roundiſh, double, and of a red colour, *fig.* 3.

PISTILLUM: a very minute barren GERMEN in the center of the floſcule.

Female Flower.

CALYX: a PERIANTHIUM of two leaves, which are oval, pointed, upright, and covered ovr with tranſparent grains or globules, *fig.* 2.

PISTILLUM: GERMEN oval, *fig.* 6. STYLES two, ſometimes three, filiform and white, *fig.* 4, 5.

SEED-VESSEL none. Valves of the *Calyx* large, heart-ſhaped, rough, including the ſeed, *fig.* 7, 8.

SEED ſingle, orbicular, and flattened, *fig.* 9.

BOTANISTS have happily divided the plants of this tribe into two Genera, each ſtrikingly diſtinguiſhable by the particular form of its ſeed-veſſells: without this diviſion, great indeed would be the difficulty of inveſtigating them.

The *Chenopodium* has hermaphrodite flowers only, which produce a ſeed contained within the calyx, compoſed of *five* leaves, which as the ſeed ripens, *does not inlarge itſelf.*

The *Atriplex* produces female bloſſoms, and male or hermaphrodite ones; the ſeed is contained within the calyx of the female bloſſom, which is compoſed of *two* leaves or valves, which *increaſe* as the ſeed becomes ripe; and in this ſtate only, is it obviouſly diſtinguiſhable from the *Chenopodium*; for at the time of its flowering, ſo ſmall are the female bloſſoms, as ſcarce to be diſtinguiſhed without a magnifying glaſs.

The plant here figured, is one of the moſt common of this genus, and one of the moſt variable in nature. Firſt it varies exceedingly according to its age, the perſon who had been accuſtomed to gather it in its young ſtate, would ſcarce recognize it when far advanced: ſecondly, it varies according to its ſituation; on dunghills it grows very ſtrong and luxuriant; by the road ſides, it is a much weaker plant, and its branches long and procumbent; in wet places, it is apt to become much more upright, the leaves ſometimes are very mealy on the under ſide, particularly when it grows on the ſea ſhore; at other times they are altogether ſmooth: in general, the broad triangular leaf readily diſtinguiſhes this ſpecies: but on dunghills, a variety ſometimes occurs with leaves not exactly correſponding to this figure, but approaching more to an oval, with an intire edge.

In its young ſtate, this plant is frequently gathered under the name of *Fat-hen*, *Lambs-quarters*, &c. and eaten in lieu of Spinach and other greens.

Birds, particularly that miſchievous one the ſparrow, are very fond of the ſeeds of the *Orach's*. I have frequently had a plant of this Genus, ſtript of its ſeeds by them in a very ſhort time.

Cattle do not ſeem to be fond of it.

In the garden and cultivated ground, it is a very troubleſome annual.

The farmer, as we have before hinted, would do well to weed his dung-heap of this and the other ſpecies, which are equally noxious.

LAMIUM ALBUM. WHITE DEAD-NETTLE.

LAMIUM *Linnæi Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Corollæ lab. ſup. integrum, fornicatum; lab. inf. 2-lobum, faux utrinque margine dentata.

Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

LAMIUM *album* foliis cordatis, acuminatis, ſerratis, petiolatis, verticillis vigintifloris. *Lin. Syſt. Vegetab. p.* 446. *Sp. pl. p.* 446. *Flor. Suecic. p.* 203.

LAMIUM foliis cordatis, acutis, ſerratis, verticillis multifloris. *Haller. hiſt. helv. n.* 271.

LAMIUM *album. Scopoli Fl. Carniol. n.* 700.

LAMIUM *album* non foetens folio oblongo. *Bauhin. Pin.* 231.

LAMIUM *album. Gerard emac.* 782.

LAMIUM vulgare album ſive Archangelicum flore albo. *Parkinſon.* 604.

Raii Syn. 240. White Archangel or Dead-Nettle.

Hudſon. Fl. Angl. ed. 1. *p.* 225. *ed.* 2. 255.

Lightfoot Fl. Scot. p. 308.

RADIX perennis, alba, geniculata, repens.

CAULES plurimi, pedales, ſuberecti, ſimplices, baſi tenuiores, quadrati, fiſtuloſi, hirſutuli, in apricis ex rufo-purpuraſcentes, ſurculi debiles, adſcendentes.

FOLIA petiolata, cordata, acuta, deflexa, inæqualiter ſerrata, apicibus denticulorum rufis introrſum verſis, venoſa, ſuperne et inferne hirſutula, ſummis ut caules ſæpe coloratis, circa radicem folioli etiam occurrunt ſubrotunda, crenulata.

FLORES verticillati, majuſculi, albi; haud infrequenter etiam rubore quodam tincti; verticilli decem quindecem aut vigintiflori.

CALYX: PERIANTHIUM monophyllum, tubuloſum, ſeſſile, nervoſum, quinquedentatum, dentibus ſetaceis, hirſutum, perſiſtens, inferne ad baſin maculis purpureis notatum et bractæâ brevi lineari ſuffultum, *fig.* 1, 2.

COROLLA monopetala, ringens; TUBUS longitudine fere labii ſuperioris, curvatus, antice inferne prominulus, ſuperne intropreſſus, faux inflata, margine utraque denticulis duobus plerumque notata, labium ſuperius fornicatum, piloſum, emarginatum, aliquando etiam dentatum, lineis duabus elevatis ad verticem coadunatis notatum, labium inferius bifidum, reflexum, crenulatum, ad baſin maculatum, *fig.* 3, 4.

STAMINA: FILAMENTA quatuor, filiformia, alba, apicibus villoſis, paululum incraſſatis et incurvatis: ANTHERÆ purpureæ, hirſutæ; POLLEN flavum, *fig.* 5.

PISTILLUM: GERMEN quadrifidum, *fig.* 6, glandulâ cinctum, *fig.* 7: STYLUS filiformis longitudine et ſitu Staminum: STIGMA bifidum acutum, *fig.* 8, 9.

SEMINA quatuor, in fundo calycis, trigona, appendiculata, *fig.* 10,

ROOT perennial, white, jointed, and creeping.

STALKS numerous, a foot high, nearly upright, unbranched, ſlender at bottom, ſquare, hollow, and ſlightly hairy; in expoſed ſituations, of a reddiſh purple colour: the young ſhoots weak and riſing upward.

LEAVES ſtanding on foot-ſtalks, heart-ſhaped, pointed, hanging down, unequally ſerrated; the tips of the little teeth red and turned inward, veiny, above and beneath ſomewhat hirſute; the uppermoſt leaves, as well as the ſtalks, frequently coloured; the leaves about the root are often ſmall, round, and crenated.

FLOWERS growing in whirls, largiſh, of a yellowiſh white colour, not uncommonly tinged with red; the whirls having ten, fifteen, or twenty flowers in them.

CALYX: a PERIANTHIUM of one leaf, tubular, ſeſſile, rib'd, hirſute and continuing, having five teeth, which are ſetaceous; on its lower ſide, at bottom, marked with purple ſpots, and ſupported by a ſhort linear bracteal leaf, *fig.* 1, 2.

COROLLA monopetalous and ringent; the TUBE nearly the length of the upper lip, and crooked, anteriorly prominent below, and preſſed in above; the mouth inflated, and marked generally on each ſide with two little teeth; the upper lip arched, hairy, with a ſlight notch, and ſometimes indented, diſtinguiſhed by two elevated lines, which unite at the crown; the inferior lip bifid, turned back, ſlightly notched, and ſpotted at bottom, *fig.* 3, 4.

STAMINA: four FILAMENTS, filiform, white, the tips villous, a little thickned, and bent inward: ANTHERÆ purple and hairy; POLLEN yellow, *fig.* 5.

PISTILLUM: GERMEN divided into four, *fig.* 6, ſurrounded by a gland, *fig.* 7. STYLE filiform, of the ſame length and ſituation as the Stamina: STIGMA bifid and acute, *fig.* 8, 9.

SEEDS four, in the bottom of the Calyx, three cornered, with a little appendage at bottom, *fig.* 10.

THE *White Dead-Nettle* or *Archangel*, is one of our earlieſt ſpring plants, ornamenting our banks in April and May; and is much reſorted to by Bees for the ſake of its honey, which is ſecreted into the bottom of the tube in conſiderable plenty, by a little gland ſurrounding the baſe of the germen.

The flowers have been particularly celebrated in uterine fluors, and other female weakneſſes; as alſo in diſorders of the lungs; but they appear to be of very weak virtue: *Lewis's Diſp. part.* 2. *p.* 163.

The bruiſed leaves are recommended to diſcuſs tumours, even of the ſchrophulous kind; *Rutty's Mat. Med. p.* 271; but very little dependance is to be placed on ſuch recommendations. There is ſcarce a plant but what (if we may believe the antients) poſſeſſes ſome wonderfully healing power of this kind.

Like the other *Lamiums*, it has a diſagreeable ſmell when bruiſed.

Boys make whiſtles of the ſtalks.

In the ſouth of France, it is ſaid to occur with a purple flower. I have frequently found it ſlightly tinged with red.

The *Phalæna Chryſitis, Burniſhed Braſs Moth, Lin. Faun. Suecic. p.* 311. *Albin. Inſect. tab.* 71, feeds on it: and in Sweden the leaves are eaten in the ſpring as a pot-herb; *Lin. Flor. Suecica.*

Having a ſtrong creeping perennial root, and being a plant which cattle diſlike, it ſhould be extirpated by the Farmer.



Lamium album



Epilobium hirsutum

Sansom Sculp

EPILOBIUM HIRSUTUM. LARGE-FLOWER'D WILLOW-HERB.

EPILOBIUM *Linnæi Gen. Pl.* OCTANDRIA MONOGYNIA.

Cal. 4-fidus. *Petala* 4. *Caps.* oblonga, infera. *Sem.* pappoſa.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.

EPILOBIUM *hirſutum* foliis ovato-lanceolatis, ſemiamplexicaulibus, hirſutis; caule ramoſiſſimo; radice repente.

EPILOBIUM *hirſutum* foliis oppoſitis lanceolatis ſerratis decurrenti amplexicaulibus. *Lin. Syſt. Vegetab. p.* 471. *Spec. Plant. p.* 494. *Flor. Suecic. p.* 123.

EPILOBIUM foliis ſemiamplexicaulibus, lanceolatis, hirſutis. *Haller. hiſt. helv. p.* 125.

CHAMÆNERION *hirſutum. Scopoli Fl. Carniol.* 270.

LYSIMACHIA ſiliquoſa hirſuta magno flore. *Bauhin. pin.* 245.

LYSIMACHIA ſiliquoſa. *Ger. emac.* 476.

Raii Syn. p. 311. Great hairy codded Looſeſtrife or Willow-herb, called alſo Codlings and Cream.

Hudſon. Fl. Angl. p. 141. 3. *ed.* 2. *p.* 162. 3.

Lightfoot. Fl. Scot. p. 197.

Oeder. Fl. Dan. ic. 326.

RADIX perennis, ſurculoſa, fibris capillata, e cujus capite erumpunt germina majuſcula, rubentia, in ſummâ tellure reptantia, quibus ſe late diffundit et propagat.

CAULIS tripedalis ad orgyalem, erectus, ramoſiſſimus, teres, ad baſin ſubtetragonus, hirſutus, purpuraſcens; RAMI cauli ſimiles, adſcendentes.

FOLIA ovato-lanceolata, argute denticulata, hirſuta, ſemiamplexicaulia, venoſa, ramorum ſubtortuoſa.

FLORES magni, ſpecioſi, purpurei, ſubcampanulati, paululum nutantes.

CALYX: PERIANTHIUM ſuperum, erectum, quadripartitum, baſi anguloſum, laciniis ovato-acutis, fundo villoſo, *fig.* 1.

COROLLA: PETALA quatuor, obcordata, emarginata, purpurea, baſi albida, calyce duplo longiora, *fig.* 2.

STAMINA: FILAMENTA octo, quorum quatuor longiora, alba, ſubulata: ANTHERÆ oblongæ, biloculares, flaveſcentes, *fig.* 3.

PISTILLUM: GERMEN oblongum, villoſum, inferum, tetragono-ſulcatum, glandulis minimis coronatum: STYLUS filiformis, declinatus, Staminibus longior: STIGMA craſſum, quadrifidum, laciniis revolutis, villoſis, *fig.* 4, 5, 6.

PERICARPIUM: CAPSULA triuncialis, obtuſe tetragona, ſulcata, ut in germine glandulis terminata, leniter hirſuta, quadrilocularis, quadrivalvis.

SEMINA ovata, pallide fuſca, plurima, pappoſa, lente viſa hinc convexa, ſcabriuſcula, illinc compreſſo-ſulcata, RECEPTACULO tetragono, libero, flexili ſeriatim affixa, *fig.* 7.

ROOT perennial, full of ſhoots, with numerous fibres, ſending off from the upper part ſtoles of a conſiderable thickneſs, which creeping under the ſurface of the ground, ſpread widely and propagate the plant.

STALK from three to ſix feet high, upright, very much branched, round, ſomewhat quadrangular at bottom, hirſute, and purpliſh: BRANCHES like the ſtalk, nearly upright.

LEAVES betwixt oval and lanceolate, finely toothed at the edges, hirſute, half embracing the ſtalk, veiny, thoſe on the branches a little twiſted.

FLOWERS large, ſhowy, of a purple colour, ſomewhat bell-ſhaped, and hanging down a little.

CALYX: a PERIANTHIUM placed above the Germen, upright, angular at the baſe, deeply divided into four ſegments, which are oval and pointed, the bottom in the inſide villous, *fig.* 1.

COROLLA: four PETALS inverſely heart-ſhaped, emarginated, of a purple colour with a white baſe, and twice the length of the Calyx, *fig.* 2.

STAMINA: eight FILAMENTS, four of which are ſhorter than the others, white and tapering: ANTHERÆ oblong, bilocular, and yellowiſh, *fig.* 3.

PISTILLUM: GERMEN oblong, villous, placed below the Calyx, four-corner'd and grooved, crowned with very minute glands: STYLE filiform, hanging down, and longer than the Stamina: STIGMA thick, divided into four ſegments, which are villous and roll'd back, *fig.* 4, 5, 6.

SEED-VESSEL, a CAPSULE about three inches long, obtuſely four cornered, and grooved, terminated as in the Germen with glands, ſlightly hirſute, having four cavities and four valves.

SEEDS oval, pale brown, numerous, downy, viewed with a magnifier on one ſide convex, and roughiſh, on the other, flattiſh and grooved, affixed in rows to a four-cornered, looſe, flexible RECEPTACLE, *fig.* 7.

THE *Lyſimachia ſiliquoſa hirſuta magno flore*, and the *Lyſimachia hirſuta parvo flore* of BAUHINE, are conſidered by LINNÆUS as the ſame ſpecies.

Mr. RAY, both in his *Hiſtoria Plantarum* and *Synopſis*, conſiders them as diſtinct ſpecies; and Mr. HUDSON, viewing them in the ſame light, gives a new name to the larger flowering one, calling it *ramoſum*, and retains the name of *hirſutum* for the ſmaller flowering one: but as the larger flowering plant is the ſpecies which LINNÆUS has diſtinguiſhed by the name of *hirſutum*, there appears more propriety in adopting his name for the ſpecies, and giving a new name to what he conſiders as the variety.

The ſpecies here figured, grows very commonly in and by the ſides of wet ditches, ponds, &c. riſing generally to the height of five feet.

It flowers in July and Auguſt.

A variety with a white flower ſometimes occurs; and a ſort with variegated leaves, is ſold by the gardeners.

Having a creeping root, it is very apt to increaſe too much if not properly attended to. The leaves, when young, have a ſhining appearance; and if bruiſed, ſend forth an agreeable ſmell, whence its name of *Codlings and Cream.*

Is it not a plant deſerving the notice of the Farmer? If cattle are found to eat it, either green or dryed, may it not be cultivated to advantage it wet ſituations, where other uſeful plants will not grow?

Ceraſtium Semidecandrum. Leaſt Mouſe-Ear Chickweed.

CERASTIUM *Linnæi Gen. Pl.* DECANDRIA PENTAGYNIA.
Cal. 5-phyllus. *Petala* bifida. *Capſ.* unilocularis, apice dehiſcens.
Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.
CERASTIUM *ſemidecandrum* floribus pentandris, petalis emarginatis. *Lin. Syſt. Vegetab. p.* 362. *Sp. Pl.* 627. *Fl. Suecic. n.* 416.
MYOSOTIS caule ſimplici, foliis ovatis, hirſutis, tubis ternis. *Haller. hiſt. n.* 894.
CENTUNCULUS ſemidecander. *Scopoli. Fl. Carniol. n.* 549.
MYOSOTIS arvenſis hirſuta minor. *Vaillant. tab.* 30. *fig.* 2.
CERASTIUM hirſutum minus parvo flore. *Raii Syn. ed.* 3. *t.* XV. *fig.* 1. *Hudſon. ed.* 2. *p.* 200. *Light. p.* 241.

RADIX annua, fibroſa, albida.

CAULIS in locis ficciſſimis ſimplex, biuncialis, erectus; ſæpius vero ramoſus, aut pluribus cauliculis compoſitus, ſicut in icone exprimitur; primo vere cauliculi ſupra muros aut terram expanduntur, tandem ſuberecti, triunciales, aut etiam ſemipedales fiunt, colore purpuraſcente, et pilis glanduliferis veſtiti.

FOLIA radicalia oblongo-ovata, prope apicem dilatata, acuta, puncto rufo terminata, baſi anguſtata, connata, leviuſcula, medio per longitudinem ſulcata, caulina ovata, villoſa.

BRACTEÆ duæ, concavæ, viſcoſæ, membranâ marginatæ, ſub ſingulâ dichotomiâ caulis.

FLORES albi, pedunculati, ſubcorymboſi.

PEDUNCULI villoſi, ad baſin paululum incraſſati, floreſcente plantâ longitudine calycis, erecti; peractâ floreſcentiâ deorſum flectuntur, et duplo longiores evadunt, demum eriguntur.

CALYX: PERIANTHIUM pentaphyllum, foliolis lanceolatis, membranâ acuminatâ Corolla longiore terminatis, viſcoſis, *fig.* 1, 2.

COROLLA: PETALA quinque, oblonga, calyce breviora, apice acutè emarginata, ſæpe eroſa, *fig.* 3, 4.

STAMINA: FILAMENTA plerumque quinque ſubinde ſex, raro plura, alba, Corollâ breviora: ANTHERÆ ſubrotundæ, flaveſcentes, *fig.* 5.

PISTILLUM: GERMEN ovatum: STYLI quinque, capillares, albi, villoſi: STIGMATA ſimplicia, *fig.* 6, 7.

PERICARPIUM: CAPSULA membranacea, ſcarioſa, quinquenervis, ore decemdentato, *fig.* 8.

SEMINA plurima, minima, ovata, flaveſcentia, *fig.* 9, 10.

ROOT annual, fibrous, of a whitiſh colour.

STALK in very dry places is ſimple, upright, and about two inches high; but more commonly is branched, or compoſed of numerous ſmall ſtalks, as expreſſed in the figure: theſe early in the ſpring, are expanded on the walls or earth, finally become nearly upright, three inches, or ſometimes even ſix inches high, of a purpliſh colour, and covered with hairs, having glands at their extremities.

LEAVES near the root of an oblong oval ſhape, dilated near the top, terminating in a ſharp red point, narrower towards the baſe, and uniting around the ſtalk, nearly ſmooth, and grooved down the middle: thoſe of the ſtalk oval and villous.

FLORAL-LEAVES two, hollow, viſcous, and edged with a membrane, placed under each diviſion of the ſtalk.

FLOWERS white, ſtanding on foot-ſtalks, and forming a kind of Corymbus.

FLOWER-STALKS villous, and thickened a little at bottom, while the plant is in flower the length of the Calyx, and upright, the flowering over they are bent backward, and become twice as long, finally they again become upright.

CALYX: a PERIANTHIUM of five leaves, lanceolate, viſcous, and terminated by a pointed membrane, which is longer than the Corolla, *fig.* 1, 2.

COROLLA: five PETALS, which are oblong, and ſhorter than the Calyx, ſharply cut in at top, and often appearing jagged, *fig.* 3, 4.

STAMINA: FILAMENTS generally five, now and then ſix, ſeldom more, white, ſhorter than the Corolla; ANTHERÆ nearly round, of a yellowiſh colour, *fig.* 5.

PISTILLUM: GERMEN oval; STYLES five, very fine, white, and villous: STIGMATA ſimple, *fig.* 6, 7.

SEED-VESSEL, a membranous CAPSULE, ſonorous when touched, having five ribs, the mouth opening with ten teeth, *fig.* 8.

SEEDS numerous, very minute, oval and yellowiſh, *fig.* 9, 10.

Much praiſe is due to the great LINNÆUS, for the accuracy with which he has deſcribed the more common *Ceraſtiums*, and particularly the preſent ſpecies. To Monſieur VAILLANT the public are alſo much indebted, for the accurate and elegant figures which he has given of them in his *Flora Pariſienſis*.

In the third edition of RAY's *Synopſis*, the *ſemidecandrum* is added by DILLENIUS, who has there given a figure of it, which, although expreſſive of the plant as it commonly grows on heaths, yet tends to miſlead the ſtudent with an idea, that minuteneſs is its chief characteriſtic: the deſcription alſo has a ſimilar tendency. It ſays, that the ſtalks are not viſcous, and that it flowers ſomewhat later than the *viſcoſum*; whereas in both, the ſtalks are evidently viſcous towards the upper part; the *ſemidecandrum* alſo flowers equally early; and inſtead of being leſs branched, as is there aſſerted, it is in a common way more ſo. It is true that both ſpecies, when they grow in very barren places (and in which this ſpecies ſeems chiefly to have been ſought for) have only a ſimple ſtalk, and often do not ariſe to the height of two inches.

The *ſemidecandrum* is a much more common plant than is generally imagined; and is diſtinguiſhed, particularly when in bloſſom, from all the other *Ceraſtiums* with the greateſt facility.

There is ſcarcely a wall or heath around town, on which this plant may not be found in abundance; particularly about *Hackney*; as alſo under *Greenwich-Park-Wall*, facing *Blackheath*, as well as on the heath itſelf. It comes into bloſſom ſoon after the *Draba verna*, and, like that plant, ſoon diſappears.

It may be diſtinguiſhed from the *Ceraſtiums*, when in bloſſom, by having only five ſtamina, whence its name. I have ſometimes found more; but this number is ſufficiently conſtant to form a very good ſpecific character. LINNÆUS remarks its having ten ſtamina, five of which produce no Antheræ: theſe I muſt confeſs never to have ſeen. SCOPOLI obſerves, that he always found it with ten ſtamina, and attributes the want of Antheræ in LINNÆUS's five, to the five exterior ones quickly loſing their Antheræ. It is poſſible that in *Carniola*, this plant may occur with ten ſtamina; but here, like the *Alſine*, it certainly loſes one half of them.

The petals form a more invariable character, being always ſhorter than the calyx, acutely cut in at top, as if a piece had been taken out with a pair of ſciſſors, and frequently irregularly jagged or gnawed: they are alſo much broader than thoſe of the *Ceraſtium viſcoſum*.

The calyx too is often of conſiderable uſe in determining this ſpecies (as it may be obſerved when neither the ſtamina or petals are viſible) at leaſt from the *vulgatum*, its leaves being very thickly covered with hairs, having glands at their extremities, vid. *fig.* 1, 2. which glands are altogether wanting in the *vulgatum*. The membrane alſo, which terminates the leaves of the calyx, is remarkably long in this ſpecies.

Theſe circumſtances, if attended to, together with the remarks to be hereafter made on the *Ceraſtium vulgatum*, will, it is hoped, enable the ſtudent to inveſtigate theſe plants, and fix them with certainty.

No virtues are attributed to it: and it is too inconſiderable to be noxious in agriculture.



Cerastium semidecandrium



Orchis masculaf

ORCHIS MASCULA. EARLY SPOTTED ORCHIS.

ORCHIS *Linnæi Gen. Pl.* GYNANDRIA DIANDRIA.
Nectarium corniforme pone florem.
Raii Syn. Gen. 26. HERBÆ RADICE BULBOSA PRÆDITÆ.
ORCHIS *maſcula* bulbis indiviſis, nectarii labio quadrilobo crenulato: cornu obtuſo petalis dorſalibus reflexis. *Lin. Syſt. Vegetab. p.* 674. *Fl. Suecic. p.* 319. *n.* 795.
ORCHIS radicibus ſubrotundis; petalis lateralibus reflexis; labello trifido; ſegmento medio longiori, bifido. *Haller hiſt. n.* 1283. *tab.* 33.
ORCHIS *maſcula. Scopoli Fl. Carniol. n.* 1111.
ORCHIS morio mas foliis maculatis. *Bauhin. pin.* 81. *Parkinſon,* 1346.
CYNOSORCHIS morio mas. *Gerard. emac.* 208. *Raii Syn. p.* 376. *n.* 3. The Male Fool-ſtones. *Hudſon. Fl. Angl. p.* 333. *Oeder. Fl. Dan. t.* 457. *Lightfoot. Fl. Scot. p.* 515.

RADIX: Bulbi duo ſubrotundi, majuſculi.

CAULIS pedalis, erectus, teres, ſolidus, ſuperne purpuraſcens, nudus, inferne foliis vaginantibus veſtitus.

FOLIA latiuſcula, maculis atropurpureis plerumque inſignita, inferne carinata.

SPICA longa, ſpecioſa, laxa.

BRACTEÆ purpureæ, lanceolatæ, ſubmembranaceæ, germine paulo breviores, apicibus paululum contortis.

COROLLA: PETALA quinque, purpurea; duo ovato-acuta, *erecta*, carinata, apicibus incurvatis, tria conniventia in galeam: LABELLUM amplum, trilobum, medio productiore, omnibus acute crenulatis, et baſi maculatis: FAUX alba.

EXPLIC. FIG.

Fig. — 1, Bractæa.
2, 3, Petala.
4, Labellum.
5, Nectarium, nat. magnit.
6, Glandula ad baſin Filamenti.
7, Filamentum.
8, Antheræ.
9, Receptaculum glandularum Filamentorum.
10, Theca Antherarum clauſa.
11, Eadem aperta.
12, Anthera extenſa.
13, Stigma.
14, Germen, auct.

ROOT: two Bulbs of a roundiſh form, and ſomewhat large.

STALK a foot high, upright, round, ſolid, above naked and purpliſh, below clothed with ſurrounding leaves.

LEAVES broadiſh, moſt commonly marked with dark purple ſpots, the midrib projecting ſharply on the under ſide.

SPIKE long, ſhowy, looſe.

FLORAL-LEAVES purple, lanceolate, ſomewhat membranous, a little ſhorter than the Germen, the tips a little twiſted.

COROLLA: five purple PETALS, two of which are of an oval pointed ſhape, *upright*, with a projecting rib, the tips bending inward: the remaining three form the galea or helmet: the LIP large, with three lobes, of which the middle one is the longeſt, all of them ſharply notched, and ſpotted at the baſe: MOUTH white.

EXPLANATION of the FIGURES.

Fig. — 1, The Floral-leaf.
2, 3, The Petals.
4, The Lip.
5, The Nectary of their natural ſize.
6. The Gland at the baſe of the Filament.
7, The Filament.
8, The Antheræ.
9, The Cavity containing the Glands of the Filaments.
10, The caſe containing the Antheræ cloſed.
11, The ſame opened.
12, The Anthera ſtretched out.
13, The Stigma.
14, The Germen, magnified.

Students in general, find a difficulty in obtaining a clear idea of the parts of fructification in the *Orchis* tribe. There is a peculiarity of ſtructure runs through the whole of them, very different from what we meet with in plants in general.

The greater part of this genus have bulbous roots, which are yearly renewed; ſome have fibrous roots, which alſo partake of the ſame nature. As a proof of their being yearly renewed, we always find, when there are two bulbs, that one of them is in a more withered ſtate than the other; and if we take the roots up in Autumn, we find one bulb only.

Theſe plants multiply themſelves very little. The ſmall increaſe they make, appears to be from off-ſets. Hitherto we have no ſatisfactory proof of their being propagated from ſeed; yet the ſeed-veſſels in many of them, are large, well formed, and filled with ſeeds; which though extremely minute, appear perfect.

The ſmallneſs of the ſeed is, however, no argument againſt its vegetating: ſome of the *Ferns*, whoſe ſeeds are much ſmaller, are well known to ſome ingenious nurſerymen near London*, to be propagated from ſeed, and to come up ſpontaneouſly in their hot-houſes, where the original plant has ſcattered its ſeed: and it is moſt probably owing to a want of minute attention, that the progreſs of the *Orchis* ſeedlings has not yet been obſerved.

Were we however diſpoſed to doubt the vegetative power of theſe ſeeds, we might urge, that their barreneſs was owing to their not being properly impregnated; the Antheræ in the *Orchis* tribe, appearing to be totally different in their ſtructure, from thoſe of plants in general; and not containing, ſo far, at leaſt, as I have yet been able to diſcover, any ſimilar pollen, or impregnating duſt.

Each flower has two ſtamina, whoſe ſtructure is well deſerving the attention of the curious: each of theſe ſtamina is contained within a bag or caſe, the edges of which fold over each other, and open anteriorly, as the plant advances towards maturity, *fig.* 10, 11. At this period, in many of the *Orchis* tribe, they hang down out of their caſes towards the ſtigma, and are particularly viſible in the *Bee Orchis*, and ſome others: on the ſlighteſt pull they are drawn out, and then at the baſe of each filament, we diſcover a ſmall tranſparent globule, *fig.* 6; and at the top a club-ſhaped ſubſtance, moſt commonly of a yellow colour, and granulated ſurface, which muſt be conſidered as the *Anthera*, *fig.* 8. On ſtretching this ſubſtance before the view of a microſcope, it appears to be compoſed of a number of cubic or irregularly ſquare corpuſcles, united together by fine elaſtic threads, *fig.* 12: that theſe corpuſcles produce the effect of *Pollen* ſeems highly probable, though in a manner, at preſent unknown to us.

There is no difficulty in diſtinguiſhing this ſpecies from all our other *Orchis's:* its ſpotted leaves and early bloom, will in general be ſufficient.

The beauty of its leaves and flowers, juſtly entitle it to a place in the gardens of the curious; and in which, if planted in a ſhady ſituation, it will readily grow.

It flowers in April and May.

About London it is become ſomewhat ſcarce; but in the woods and meadows in moſt parts of England, no plant more abounds.

Should it ever be found practicable, as well as profitable, to cultivate this genus of plants, for the purpoſe of making *Salep*, this ſpecies appears as likely to anſwer as any of them.

The extraordinary invigorating powers of the roots of theſe plants, have been handed down to us with ceremony by many great names amongſt antiquity: but we readily ſubſcribe to the opinion of Monſieur GARIDEL, who in ſpeaking of the *Orchis*, ſays that great names have introduced many abſurd medicines.

* Meſſrs. LEE and GORDON.

EPILOBIUM VILLOSUM. HOARY WILLOW-HERB.

EPILOBIUM *Linnæi Gen. Pl.* OCTANDRIA MONOGYNIA.

Cal. 4-fidus. *Petala* 4. *Capſ.* oblonga, infera. *Sem.* pappoſa.

Raii Syn. Gen. 21. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.

EPILOBIUM *villoſum* foliis oblongo-lanceolatis, dentatis, pubeſcentibus, caule tereti villoſo.

EPILOBIUM *hirſutum* foliis lanceolatis ſerratis ſubdecurrentibus; inferioribus oppoſitis, caule ſubſimplici. *Hudſon, Fl. Ang. ed.* 2. *p.* 162.

LYSIMACHIA filiquoſa hirſuta parvo flore. *C. Bauhin. pin.* 245. *Prod.* 116.

LYSIMACHIA filiquoſa hirſuta flore minore. *I. B. II.* 906.

LYSIMACHIA filiquoſa ſylveſtris hirſuta. *Parkinſon. Raii Hiſt. Pl. p.* 861. *Syn. ed.* 3. *p.* 311.

The leſſer hairy codded Looſeſtrife or Willow-herb, with ſmall flowers.

Lightfoot, Fl. Scot. p. 198. var. hirſut.

RADIX perennis, fibroſa.

ROOT perennial and fibrous.

CAULIS pedalis ad tripedalem, ſimplex, aut ramoſus pro loco natali, teres, *villoſus*.

STALK from one to three feet high, ſimple or branched according to its place of growth, round, *hoary*, and purpliſh.

FOLIA oblongo-lanceolata, connata, non vero decurrentia, rare dentata, dentibus glanduloſis, mollia, pubeſcentia, ſubtus albida, patentia, in locis ſiccioribus ſæpe erecta.

LEAVES oblong and lanceolate, uniting at bottom around the ſtalk, but not running down it, teeth at the edge few and glandular, ſoft, downy, underneath whitiſh, ſpreading, but in more dry ſituations frequently upright.

FLORES parvi, purpurei.

FLOWERS ſmall and purple.

CALYX: PERIANTHIUM tetraphyllum, ſuperum, foliolis ovato-lanceolatis, hirſutulis, *fig.* 1.

CALYX: a PERIANTHIUM of four leaves, placed above the Germen, oval, pointed, and ſlightly hirſute, *fig.* 1.

COROLLA: PETALA quatuor, obcordata, calyce duplo fere longiora, *fig.* 2.

COROLLA: four PETALS inverſely heart-ſhaped, almoſt twice the length of the Calyx, *fig.* 2.

STAMINA: FILAMENTA octo; ſubulata, alterna breviora: ANTHERÆ ovales, compreſſæ, obtuſæ, *fig.* 3.

STAMINA: eight FILAMENTS, tapering, the four alternate ones ſhorteſt: ANTHERÆ oval, flattened, and obtuſe, *fig.* 3.

PISTILLUM: GERMEN cylindraceum, longiſſimum: STYLUS filiformis: STIGMA craſſum, quadrifidum, laciniis vix vero revolutis, *fig.* 4.

PISTILLUM: GERMEN cylindrical, very long: STYLE filiform: STIGMA thick, divided into four ſegments, which are ſcarcely rolled back, *fig.* 4.

PERICARPIUM: CAPSULA prælonga, rubeſcens.

SEED-VESSEL, a long CAPSULE, of a reddiſh colour.

SEMINA plurima, pappo coronata.

SEEDS numerous, covered with a pappus or down.

In three reſpects does this plant particularly, and invariably, differ from the *hirſutum*; of which, as hath before been obſerved, it is conſidered by LINNÆUS and other writers, as a variety only; viz. in its *bloſſoms, root,* and *pubeſcence;* either of which would appear alone ſufficient to conſtitute it a diſtinct ſpecies.

The bloſſoms in the firſt place, are not in general more than one third as large; the root does not creep; and the ſtalk and leaves are covered with numerous ſoft hairs, which give the whole plant a whitiſh or hoary appearance, that is particularly ſtriking.

Beſides theſe characters, the plant is alſo much ſmaller; and, in general, is not ſo much branched. I have often gathered ſpecimens of it not more than a foot in height, with a ſimple ſtalk; and have alſo frequently found it much higher, as well as much branched, when there was no reaſon to ſuppoſe the plant had received any injury, which Mr. HUDSON aſſerts is always the caſe, when the plant occurs in the latter ſtate. The Calyx and Stigma, differ alſo very materially in the two plants.

It is very common with us on the banks of rivulets, and in watery places; and flowers in July and Auguſt.

No particular qualities are aſcribed to it.



Epilobium villosum



Hypnum sericeum.

HYPNUM SERICEUM. SILKY HYPNUM.

HYPNUM *Linnæi Gen. Pl.* CRYPTOGAMIA MUSCI.

Anthera operculata. *Calyptra* lævis. *Filamentum* laterale ortum e perichætio.

Raii Syn. Gen. 3. MUSCI.

HYPNUM *ſericeum* ſurculo repente, ramis confertis erectis, foliis ſubulatis, antheris erectis. *Lin. Syſt. Vegetab. p.* 801. *Sp. Pl. p.* 1595. *Fl. Suecic. n.* 1036.

HYPNUM *ſericeum. Scopoli. Fl. Carniol. p.* 340.

HYPNUM ramis teretibus; foliis pilo præpilatis; capſulis cylindricis, erectis, ariſtatis. *Haller. hiſt. n.* 1750.

HYPNUM vulgare ſericeum recurvum, capſulis erectis cuſpidatis. *Dillen. Muſc.* 323. *t.* 42. *f.* 59.

MUSCUS terreſtris luteo-viridans ſericeus repens. *Moris. hiſt.* 3. *p.* 626. *ſ.* 15. *t.* 5. *fig.* 25.

MUSCUS arboreus ſplendens ſericeus. *Vaill. Paris.* 132. *t.* 27. *fig.* 3.

HYPNUM repens trichoides terreſtre luteo virens vulgare majus, capitulis erectis. *Raii Syn. p.* 84.

Hudſon, Fl. Angl. ed. 1. *p.* 428.

Lightfoot, Fl. Scot. v. 2. *p.* 762.

CAULES ſive viticuli longi, repentes, fibrillis copioſis, tomentoſis adhærentes, valde ramoſi, in denſos cæſpites congeſti, ramis creberrimis, ſurrectis, brevibus, ſubteretibus, in ſiccitate incurvis, *fig.* 1, tactu rigidis, in humiditate rectis mollibus.

STALKS, or ſhoots, long, creeping, adhering by numerous ſmall, woolly, fibres, very much branched, and forming cloſe tufts; branches numerous, upright, ſhort, and roundiſh; when dry, bending down at top, and ſomewhat ſtiff, *fig.* 1; when moiſt, upright and ſoft.

FOLIA ovato-lanceolata, *fig.* 2, in pilum longum terminata, denſiſſime imbricata; in ſiccitate appreſſa, capillaria; humida latiora, patula, ex obſcuro viridia, cum ſericeo ſplendore ad luteum vergente.

LEAVES oval and pointed, *fig.* 2, terminating in a long hair, lying cloſely one over the other, when dry preſſed together, and very fine; when moiſt broader, and more ſpreading, of a dulliſh green, inclining to yellow, with a ſhining ſilky appearance.

PEDUNCULI ſemunciales, unciales, purpureæ, perichætio ſquamoſo cinctæ, *fig.* 3, confertæ, circa medium ſurculi ortæ.

FOOT-STALKS an inch and a half or an inch long, purple, at bottom covered with a ſcaly perichætium, *fig.* 3, ariſing from about the middle of the ſhoots.

CAPSULÆ oblongæ, teretes, erectæ, inferne paululum incraſſatæ, ex livido fuſcæ, *fig.* 6, 7, per medium diſciſſa, *fig.* 10.

CAPSULES oblong, round, upright, ſomewhat enlarged at bottom, of a livid brown colour, *fig.* 6, 7; cut down the middle at *fig.* 10.

CALYPTRA pallida.

CALYPTRA pale brown.

OPERCULUM breve, roſtratum, miniatum, *fig.* 8.

OPERCULUM ſhort, ending in a beak of a bright red colour, *fig.* 8.

CILIÆ albidæ, erectæ, una tantum ſeries, *fig.* 9.

CILIÆ or hairs whitiſh, upright, and one row only, *fig.* 9.

The *Hypnum ſericeum* is one of our moſt common, as well as one of our earlieſt *Moſſes*, producing its Capſules from September to February.

It generally puts forth its fructifications in the greateſt plenty, on the tops of old walls. It creeps alſo on the ground, as well as on the trunks of trees.

None of our *Moſſes* afford a more beautiful carpet: it frequently exhibits all the richneſs and ſoftneſs of ſilk, particularly when dry. But thoſe patches of it, which put on this yellow and ſhining appearance, by which it is ſo readily diſtinguiſhed, do not always produce fructifications in the greateſt abundance.

It may be diſtinguiſhed from the *Hypnum rutabulum*, which often occurs with it, by having longer and more upright Capſules.

DILLENIUS has deſcribed this *Moſs* with his uſual accuracy, which is modernized, and ſomewhat improved by WEIS, from whom our deſcription is almoſt literally taken.

TRIFOLIUM ORNITHOPODIOIDES. BIRDS-FOOT TREFOIL.

TRIFOLIUM *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA.

Flores ſubcapitati. *Legumen* vix calyce longius, non dehiſcens, deciduum.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

TRIFOLIUM *ornithopodioides* leguminibus nudis octoſpermis ſubternis, calycibus duplo longioribus, caulibus declinatis. *Linnæi Syſt. Vegetab. p.* 571. *Sp. Pl.* 1078.

MEDICAGO leguminibus ternatis, erectis, recurvis, deſcendentibus, pedunculo communi. *Hort. Cliff.* 376.

TRIFOLIUM ſiliquoſum loto affine ſiliquis ornithopodii. *Pluk. phyt. t.* 68. *fig.* 1.

FÆNUMGRÆCUM humile repens, ornithopodii ſiliquis brevibus erectis. *Raii Syn. p.* 331, Fenugreek with Birds-Foot Trefoil Pods, *tab.* 14. *fig.* 1. *Hudſon Fl. Angl. p.* 282.

Oeder Fl. Dan. icon. 368.

Lightfoot Fl. Scot. p. 403.

RADIX ſimplex, albida, fibroſa, tuberculis obſita.

ROOT ſimple, whitiſh, fibrous, and beſet with little knobs or tubercles.

CAULES plures, procumbentes, in humidiore aut pinguiore ſolo palmares aut ſeſquipalmares alias vix quandrantales, craſſiuſculi, et ſubrigidi.

STALKS numerous and procumbent, in a moiſt or rich ſoil from four to ſix inches in length, but moſt commonly from two to three, thickiſh for the ſize of the plant, and ſomewhat rigid.

FOLIA perexigua, terna, obcordata, profunde denticulata et veluti eroſa, lævia, venis rectis non ramoſis, *fig.* 7.

LEAVES very ſmall, growing by threes, inverſely heart-ſhaped, deeply notched, ſo as to appear as if gnawed, ſmooth, the veins ſtraight, and not branched, *fig.* 7.

STIPULÆ ad baſin foliorum binæ, magnæ, venoſæ, acuminatæ.

STIPULÆ at the baſe of the leaves two, large, veiny, and pointed.

FLORES axillares, carnei, pedunculis breviſſimis inſidentes, terni, bini aut etiam ſolitarii.

FLOWERS axillary, pale red, ſitting on exceedingly ſhort foot-ſtalks, growing three or two together, ſometimes ſingly.

CALYX: PERIANTHIUM tubuloſum, quinquedentatum, perſiſtens, læve, ſtriatum, dentibus acuminatis, nudis, duobus ſuperioribus longioribus, *fig.* 1.

CALYX: a PERIANTHIUM which is tubular, with five teeth, permanent, ſmooth, ſtriated, the teeth acuminated, naked, the two uppermoſt longeſt, *fig.* 1.

COROLLA papilionacea: VEXILLUM reflexum: ALÆ divergentes, *fig.* 2.

COROLLA papilionaceous; the STANDARD turning back; and the WINGS ſeparating, *fig.* 2.

PISTILLUM: GERMEN oblongum, villoſum, *fig.* 3.

PISTILLUM: GERMEN oblong and villous, *fig.* 3.

PERICARPIUM: LEGUMEN magnum, calyce duplo longius, apice mucronatâ incurvâ, in duas valvulas ægre dehiſcens, *fig.* 4, 5.

SEED-VESSEL, a large LEGUMEN, twice the length of the Calyx, the tip ending in a point and bending downward, with difficulty ſplitting into two valves, *fig.* 4, 5.

SEMINA ſex ad decem, difformia, pallida, maculata, *fig.* 6.

SEEDS from ſix to ten, irregular, pale, and ſpotted, *fig.* 6.

This little plant is perhaps more common in this country than is generally imagined, and has probably been overlooked from its minuteneſs.

It appears to delight in a dry, expoſed, gravelly, or ſandy ſoil, in which the *Arenaria rubra*, *Trifolium ſubterraneum*, *Feſtuca ovina*, and *Sagina erecta* uſually grow.

I have found it plentifully in *Tothillfields*, *Weſtminſter*, and on *Blackheath*. Mr. HUDSON mentions its growing near *Penzance*, in *Cornwall*; and Mr. LIGHTFOOT in *Scotland*.

This plant is not like the *Trifolium ſubterraneum*, ſtrikingly viſible at a diſtance, but is to be diſcovered only by carrying the eye near the ground. When once found, there is no difficulty in diſtinguiſhing it from the other ſpecies. Its leaves are ſmooth, and much notched or gnawed at the edges; its flowers are pale red; its ſeed-veſſels remarkably large, and growing moſt commonly two or three together, in which ſtate they ſomewhat reſemble a bird's claw, but not in ſo great a degree as the *Ornithopus*, or *true Bird's-foot* does: the ſeed-veſſels are ſometimes ſingle.

Cultivated in a garden, it grows to a much larger plant than is repreſented on the plate.



Trifolium ornithopoides



Sonchus oleraceus

SONCHUS OLERACEUS. COMMON SOWTHISTLE.

SONCHUS *Linnæi Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Recept. nudum. *Cal.* imbricatus ventricoſus. *Pappus* piloſus.

Raii Syn. Gen. 6. HERBÆ FLORE COMPOSITO, NATURA PLENO LACTESCENTES.

SONCHUS *oleraceus* pedunculis tomentoſis calycibus glabris. *Linnæi Syſt. Vegetab. p.* 594. *Flor. Suecic. p.* 269. *Sp. Plant. p.* 1116.

SONCHUS foliis amplexicaulibus, dentatis, integris aut ſemipinnatis, calycibus lævibus. *Haller. hiſt. p.* 10. *n.* 21.

HIERACIUM *oleraceum. Scopoli Fl. Carniol. p.* 110.

SONCHUS lævis laciniatus latifolius. *Bauhin. Pin.* 124.

SONCHUS lævis. *Ger. emac.* 292.

SONCHUS vulgaris. *Parkinſon* 805.

Raii Syn. 162. *Hudſon Fl. Angl. p.* 294. *ed.* 2. *p.* 336.

Lightfoot Fl. Scot. p. 428.

RADIX annua, ſimplex, fibroſa, albida, lacteſcens.

ROOT annual, ſimple, fibrous, whitiſh, and milky.

CAULIS pedalis ad tripedalem, lævis, purpuraſcens, tener, fiſtuloſus, ad baſin teres, ſuperne ſubanguloſus, ramoſus.

STALK from one to three feet high, ſmooth, purpliſh, tender, hollow, at bottom round, towards the top ſomewhat angular, and branched.

FOLIA amplexicaulia, lævia, glauca, nervo medio purpuraſcente, *inferiora* pinnatifida, pinnarum paria duo aut tria, pinnis dentatis ſpinulo terminatis, lateralibus ovatis, terminali magno triangulari, *ſuperiora* integra, ovato-acuta, baſi lato.

LEAVES embracing the ſtalk, ſmooth, glaucous; the midrib purpliſh; the *lower ones* pinnatifid, conſiſting of two or three pair of pinnæ, which are indented, and each terminated by a little ſpine; the ſide ones oval, the end one large and triangular; the *upper leaves* entire, oval, pointed with a broad baſe.

PEDUNCULI tomentoſi, per ætatem nudi.

FLOWER-STALKS downy, but becoming ſmooth by age.

CALYX: communis ante floreſcentiam cylindraceus, et quaſi truncatus, poſtea ventricoſo-conicus, ſquamis plurimis, inæqualibus, lævibus, acuminatis, *fig.* 1, 2.

CALYX: the common Calyx before the flowering, cylindrical, and as it were cut off at top, afterwards bellying out, and forming a cone, covered with numerous ſmooth, unequal, pointed ſcales, *fig.* 1, 2.

COROLLA compoſita, imbricata, uniformis: FLOSCULIS monopetalis, ligulatis, quinquedentatis, *fig.* 3.

COROLLA compound, imbricated, and uniform; the FLOSCULES monopetalous, the upper part flat, with five teeth, *fig.* 3.

STAMINA in cylindrum coalita: ANTHERÆ flavæ, apicibus nigricantibus.

STAMINA uniting into a cylinder: ANTHERÆ yellow, the tip blackiſh.

PISTILLUM: GERMEN ſubovatum: STYLUS filiformis, ſtaminibus longior: STIGMATA duo tenuia, patentia.

PISTILLUM: GERMEN nearly oval: STYLE filiform, longer than the Stamina: STIGMATA two, ſlender, and ſpreading.

SEMEN oblongum, compreſſum, ſulcatum, ſcabriuſculum: PAPPUS ſeſſilis, ſimplex, tenuiſſimus, *fig.* 4, 5.

SEED oblong, flattened, grooved, roughiſh; DOWN ſeſſile, ſimple, very fine, *fig.* 4, 5.

RECEPTACULUM nudum, punctis prominulis ſcabrum, lucidum, *fig.* 6.

RECEPTACLE naked, rough with little prominent points, and ſhining, *fig.* 6.

The *Sowthiſtle* is ſubject to many varieties, ſome of which have differed ſo much from the common appearance of this plant, as to have occaſioned them to be conſidered as diſtinct ſpecies. Thus HALLER makes the *Sonchus aſper*, or *prickly Sowthiſtle*, a diſtinct ſpecies: and the old Botaniſts formed ſeveral other ſpecies of it from different circumſtances; as ſize, breadth, diviſions of its leaves, &c. But the generality of Botaniſts ſeem now diſpoſed to conſider them all as the ſame, varying from ſoil, ſituation, &c. The prickly variety ſeems to be the only one that has any pretenſions to be conſidered as diſtinct: but if any perſon will be at the pains to examine a garden over-run with theſe plants, he will readily trace it into the ſmooth.

This plant appears to have been little regarded as a medicine; but as a favourite food of hares and rabbits, it is collected with great avidity.

It abounds moſt in gardens and cultivated ground; yet is ſometimes met with on walls.

Being a large plant, and of quick growth, it is one of thoſe which uſually appear in neglected gardens, over-running moſt others, and proving more injurious to the ſlovenly gardener than the farmer.

It flowers chiefly in July, Auguſt, and September.

According to the experiments made by ſome of LINNÆUS's pupils, and publiſhed originally in the *Amœnitates* * *Academicæ*, it appears that it is eaten by goats, ſheep, and ſwine, but not reliſhed by horſes.

The young tender leaves are, in ſome countries, boiled and eaten as greens; *Lightfoot Fl. Scot.*

* In the 2d vol. of Eſſays relating to Agriculture and Rural Affairs, by Mr. ANDERSON, there is a tranſlation of theſe experiments.

SAXIFRAGA TRIDACTYLITES. RUE-LEAVED SAXIFRAGE.

SAXIFRAGA *Linnæi Gen. Pl.* DECANDRIA DIGYNIA.

Cal. 5-partitus. *Cor.* 5-petala. *Caps.* 2-roſtris, 1 locularis, polyſperma.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

SAXIFRAGA *tridactylites* foliis caulinis cuneiformibus trifidis alternis, caule erecto ramoſo. *Linnæi Syſt. Vegetab. p.* 344. *Sp. Pl. p.* 578. *Fl. Suecic. p.* 143.

SAXIFRAGA foliis petiolatis trilobatis caule erecto ramoſo et folioſo. *Haller. hiſt. helv. p.* 422. *n.* 986.

SAXIFRAGA *tridactylites. Scopoli. Fl. Carniol. p.* 237. *n.* 500.

SEDUM tridactylites tectorum. *Bauhin. Pin.* 285.

PARONYCHIA rutaceo folio. *Gerard. emac.* 624.

PARONYCHIA foliis inciſis. *Parkinſon.* 556.

SAXIFRAGA verna annua humilior. *I. R. H.* 252. *Raii Syn. p.* 354, Rue Witlow-graſs.

Hudſon Fl. Angl. p. 159. *ed.* 2. 182.

Lightfoot Fl. Scot. p. 224.

RADIX annua, fibroſa.

CAULIS plerumque triuncialis, erectus, teres, ruberrimus, ramoſus, pilis glanduliferis veſtitus ut ut folia cum calycibus.

FOLIA ima integra, ſubrotunda, caulina ſicut aſcendunt bipartita, tripartita aut quinquepartita, ſubcarnoſa, rigida, patentia, petiolis foliis longioribus complanatis inſidentia, ſuprema ſeſſilia, bipartita aut ſimplicia, ovato-lanceolata, ſuberecta.

FLORES albi, erecti, parvi.

CALYX: PERIANTHIUM monophyllum, quinquepartitum, breve, laciniis ovato-acutis, ſuberectis, *fig.* 1.

COROLLA: PETALA quinque exigua, laciniis calycis paulo longiora, ovata, obtuſa, patentia, baſi anguſta, immaculata, *fig.* 2.

STAMINA: FILAMENTA decem, ſubulata: ANTHERÆ ſubrotundæ, flavæ, *fig.* 3.

PISTILLUM: GERMEN inferum, calyce obtectum, ſubrotundum, deſinens in STYLOS duos breves: STIGMATA villoſa, *fig.* 4.

PERICARPIUM: CAPSULA ſubrotunda, bilocularis, biroſtris, ore aperto, ovato, integro.

SEMINA minima, nigricantia.

ROOT annual and fibrous.

STALK generally about three inches high, upright, round, of a bright red colour, branched and covered (as alſo the leaves and calyx) with hairs having glands at their extremities.

LEAVES: the bottom leaves entire and roundiſh; thoſe of the ſtalk as they aſcend, are deeply divided into two, three, or five ſegments, ſomewhat fleſhy, rigid, and ſpreading, ſitting on flattened foot-ſtalks longer than the leaves; the uppermoſt leaves ſeſſile, divided into two ſegments, or intire, of an oval pointed ſhape, and nearly upright.

FLOWERS white, ſmall, and upright.

CALYX: a PERIANTHIUM of one leaf, ſhort, and divided into five ſegments, which are oval, pointed, and upright, *fig.* 1.

COROLLA: five ſmall PETALS, a little longer than the ſegments of the calyx, oval, blunt, and ſpreading, narrowed at bottom, and ſpotleſs, *fig.* 2.

STAMINA: ten FILAMENTS, tapering towards the top: ANTHERÆ roundiſh and yellow, *fig.* 3.

PISTILLUM: GERMEN placed below the calyx and covered by it, of a roundiſh ſhape, and terminating in two ſhort STYLES: the STIGMATA villous, *fig.* 4.

SEED-VESSEL a roundiſh CAPSULE of two cavities and two beaks, the mouth oval, open, and intire.

SEEDS very minute, of a blackiſh brown colour.

IN the months of April and May, this little plant ſucceeds the *Draba verna*, and is no ſmall ornament to the tops of our walls. It grows alſo on houſes, and among rubbiſh.

It varies in ſize from one to ſix inches, or even more in particular ſituations: the larger it grows, the more branched it becomes, and the more numerous are the diviſions of its leaves: on the contrary in its ſmall ſtate, the ſtalk is frequently ſimple, and the leaves undivided.

Its medical virtues, if any, are not ſufficient to preſerve it in the preſent practice.



Saxifraga Tridactylites



Trifolium subterraneum

TRIFOLIUM SUBTERRANEUM. SUBTERRANEOUS TREFOIL.

TRIFOLIUM *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA.

Flores ſubcapitati. *Legumen* vix calyce longius, non dehiſcens, deciduum.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

TRIFOLIUM *ſubterraneum* capitulis villoſis ſubquinquefloris, coma centrali reflexa rigida fructum obvolvente. *Linnæi Syſt. Vegetab. p.* 572. *Sp. Pl. p.* 1080.

TRIFOLIUM pumilum ſupinum, floſculis longis albis. *Ph. Brit. Raii Syn. p.* 327. *tab.* XIII. *fig.* 2.

TRIFOLIUM parvum Monſpeſſulanum album cum paucis floribus. *I. Bauhin.* II. 380.

TRIFOLIUM album tricoccum ſubterraneum reticulatum. *Moriſon. Hiſt. Ox.* II. 138. *s.* II. *t.* 14. *f.* 5.

TRIFOLIUM *ſubterraneum* ſeu folliculos ſub terram condens. *Magnol. Botan. Monſp.* 265. *Gouan Fl. Monſp. p.* 198.

Hudſon. Fl. Angl. p. 286. *ed.* 2. *p.* 328.

RADIX annua, ſimplex, fibroſa.
CAULES teretes, craſſiuſculi, ramoſi, procumbentes et terræ velut appreſſi, villoſi.

STIPULÆ ovato-lanceolatæ, nervoſæ.
PETIOLI pedunculis paulo longiores, denſe piloſi.

FOLIA terna, obcordata, mollia, villoſa, integerrima, maculis purpureis ſæpe variegata.

PEDUNCULI triflori aut quadriflori, peractâ floreſcentiâ verſus terram inflexi.

FLORES albi, longi, procul conſpicui.

CALYX: PERIANTHIUM oblongum, tubulatum, ſuperne rubrum, quinquedentatum, dentibus ſetaceis, piloſis, longitudine tubi, *fig.* 8, auct.
COROLLA oblonga, calyce duplo longior, alba: VEXILLUM venis dilute purpureis ſtriatum: ALÆ conniventes, vexillo breviores: CARINA parva, brevis, alis incluſa, *fig.* 1.

PISTILLUM: GERMEN ovatum: STYLUS longus, tenuis, adſcendens: STIGMA ſubrotundum, *fig.* 9.
PERICARPIUM: LEGUMEN ſubrotundum, monoſpermum, *fig.* 6.
SEMEN magnum, nitidum, ſpadiceum, *fig.* 7.
OBS. peractâ floreſcentiâ, pedunculi verſus terram deflectuntur, et filamenta alba radiculis æmula extremitatibus ſuis exſerunt, *fig.* 2. hæ vero terram nequaquam penetrant, at ſurſum eriguntur, mox apices ſtellatim expanduntur, *fig.* 3. et demum pericarpia obvolvunt, *fig.* 5.

ROOT annual, ſimple, and fibrous.
STALKS about three inches in length, frequently much longer, round, thickiſh, branched, procumbent, and as it were preſſed to the ground, covered with ſoft hairs.
STIPULÆ oval, pointed, and ribbed.
LEAF-STALKS a little longer than the flower-ſtalks, and thickly covered with hairs.
LEAVES growing by threes, inverſely heart-ſhaped, ſoft, villous, intire at the edges, and frequently variegated with purple ſpots.
FLOWER-STALKS ſupporting three or four flowers, and bending towards the earth as they decay.
FLOWERS white, long, and conſpicuous at a diſtance.
CALYX: a PERIANTHIUM oblong, tubular, on the upper part red, having five long ſlender hairy teeth the length of the tube, *fig.* 8, mag.
COROLLA oblong, twice the length of the calyx, white: STANDARD ſtriped with faint purple veins: WINGS cloſing, ſhorter than the ſtandard: KEEL ſmall, incloſed within the wings, *fig.* 1.
PISTILLUM: GERMEN oval: STYLE long, ſlender, aſcending: STIGMA roundiſh, *fig.* 9.

SEED-VESSEL: a roundiſh POD containing one ſeed, *fig.* 6.
SEED large, ſhining, of a purpliſh colour, *fig.* 7.
OBS. The flowering being over, the flower-ſtalks are bent towards the earth, and from their extremities put forth white filaments like roots, *fig.* 2. theſe do not however penetrate the earth, but riſe upwards, their tips ſoon expanding into little ſtars, *fig.* 3. and finally incloſe the ſeed-veſſels, *fig.* 5.

NOTWITHSTANDING this plant appears to have obtained its name of *ſubterraneum* from a miſapprehenſion of its oeconomy, we have choſen to retain it, rather than introduce confuſion by altering a name ſo long eſtabliſhed, eſpecially as it has a tendency to excite an enquiry into the hiſtory of the plant.

RAY, in his *Hiſt. Pl.* has given a very accurate deſcription of this plant, and related every circumſtance which takes place in its oeconomy with his uſual preciſion, except the following; "Floſculis delapſis aut marceſcentibus "*calices* ad pediculum reflectuntur et *capitula ſub terra condunt.*" Here he aſſerts, that the capituli or little heads, are buried in the earth by means of the calyces or flower cups, but does not explain in what manner. In the third edition of his *Synopſis*, publiſhed by DILLENIUS, in a note added to this plant, contained in a parentheſis, the following account occurs: "Calices floſculis exaridis deorſum tendunt, radiceſque extremitatibus ſuis agere vi- "dentur, mox vero laciniis eorum ſurſum verſis *peculiaribus fibris humo affiguntur*, quo tempore unum alterumve "ſemen terreni humoris beneficio intumeſcit, novæque plantæ productioni inſervit." Here is an attempt to account for the manner in which the heads are buried, founded however on a miſtaken obſervation; for notwithſtanding what authors have related, the ſeeds are not buried in any unuſual way, nor is there any apparatus to effect it.

It muſt be allowed, that on the firſt examination of this plant, one would be tempted to think that young roots did actually ſpring from ſome part of the ſeed as it lay on the ground connected with the plant; but a more ſtrict obſervation would diſcover, that thoſe white filaments which have the appearance of roots, were not roots in reality; that they ſprung from the end of the foot-ſtalk which ſupports the flowers, and not from either the calyx or ſeed; that inſtead of penetrating into the earth, they ſoon turned upward, put on a ſtar-like appearance at their extremities, and finally incloſed the ſeed-veſſels in a kind of prickly head.

There is certainly ſomething very extraordinary in this proceſs of nature, yet it does not appear to be uſeful in any other way, than as affording ſome kind of ſecurity to the ſeeds, which have not that thick coriaceous covering afforded to many of the Trefoils.

This ſpecies, from theſe ſingular circumſtances, is eaſily diſtinguiſhed from the others. It is not mentioned either by HALLER, SCOPOLI, or LINNÆUS in his *Fl. Suecic.* but occurs in GOUAN'S *Fl. Monſpeliac.*

It grows with us in expoſed gravelly ſituations, particularly on heaths, and is diſtinguiſhable even at a diſtance by its white bloſſoms. It occurs on many parts of *Black-heath*; and flowers in June, July, and Auguſt.

OSMUNDA SPICANT. ROUGH SPLEENWORT.

OSMUNDA *Linnæi Gen. Pl.* CRYPTOGAMIA FILICES.

Spica ramoſa: Fructific. globoſis.

Raii Syn. Gen. 4. HERBÆ CAPILLARES ET AFFINES.

OSMUNDA *Spicant* frondibus lanceolatis pinnatifidis: laciniis confluentibus integerrimis parallelis. *Linnæi Syſt. Vegetab. p.* 780. *Sp. Plant.* 1522. *Fl. Suecic. n.* 936.

STRUTHIOPTERIS, *Haller. hiſt. n.* 1687.

STRUTHIOPTERIS *Spicant. Scopoli Flor. Carniol. n.* 1258.

STRUTHIOPTERIS frondibus ſterilibus pinnatifidis, pinnulis denſis, oblongis falcatis; fructificantibus majoribus, laxius pinnatis, anguſtioribus. *Weis. Cryptog. p.* 287.

SPICANT Tragi et Germanorum.

LONCHITIS aſpera minor. *Bauhin Pin.* 359. *Parkinſon* 1042.

LONCHITIS aſpera. *Gerard emac.* 1140. *Raii Syn. p.* 118, Rough Spleenwort.
Oeder Fl. Dan. ic. 99.
Hudſon Fl. Angl. 382. *ed.* 2. *p.* 450.
Lightfoot Fl. Scot. p. 634.

FRONDES ſteriles plures ex una radice fibroſa, in orbem diſpoſitæ, ſemierectæ, aut reclinatæ, ſpithameæ, immo pedis longitudinem æquantes, *Polypodio vulgari* ſimiles, ſimplices nempe et pinnatifidæ, pinnis denſis, alternis, lanceolatis, oblongis, 2 lineas circiter latis, integerrimis, ſurſum curvis, mediis maximis, (uncialibus, ſeſquiuncialibus,) ſupernis et infernis brevioribus, nervoſis, margine cartilagineo, ſubcrenato, retrorſum flexo.

STIPES ſive nervus medius inferne fuſcis ſquamulis obſitus.

E medio centro harum frondium ſurgunt frondes fructificantes aliæ, etiam pinnatæ, at duplo illis longiores, graciliores, atro purpureæ, pinnis laxis alternis, lineam latis, mediis quoque longioribus, ſuperioribus et inferioribus ſenſim decreſcentibus, capſulis refertis.

CAPSULÆ denſe coagmentatæ, duas lineas diſtinctas, marginibus parallelas efformant, et ab initio coloris ſunt luteſcentis, ſenſim per maturitatem fuſci.

Fig. 1, Foliolum ſeu pinna cum capſulis auct.

Fig. 2, Capſula diſrupta, cum annulo.

LEAVES: ſeveral barren leaves proceed from one fibrous root, orbicularly diſpoſed, either half upright or reclining, from three inches to a foot in length, ſomewhat like the *common Polypody*, viz. ſimple and pinnatifid; the pinnæ ſet cloſely together, alternate, lanceolate, oblong, about two lines broad, perfectly entire, bent upwards; the middle ones largeſt, (even an inch or an inch and a half in length;) the upper and lower ones ſhorter, ribbed, the edge cartilaginous, very ſlightly notched, and bent backward.

STALK or midrib, beſet on its lower part with ſmall brown ſcales.

From the center of theſe leaves ariſe other leaves bearing the fructifications, which alſo are pinnated, but twice as long, and more ſlender, of a dark purple colour; the pinnæ looſely ſet, and alternate, a line in breadth, longeſt alſo in the middle, the upper and lower ones gradually decreaſing, filled with capſules.

CAPSULES cloſely crouded together, forming two diſtinct lines parallel with the edges of the leaf, at the beginning of a yellowiſh colour, becoming brown as they ripen.

Fig. 1, one of the ſmall leaves or pinnæ, with the capſules magnified.

Fig. 2, a capſule burſt open, with its ring.

BOTANISTS appear much divided as to the genus of this plant; ſome conſidering it as an *Oſmunda*, among whom is LINNÆUS; while others of great eminence contend for its being a *Struthiopteris*; of the latter opinion are HALLER, SCOPOLI, and WEIS.

The diviſion of the *Ferns* into diſtant Genera, is perhaps as difficult a taſk as any in Botany. From the mechaniſm of the fructifications little is to be expected, as a great ſimilarity ſeems to pervade the whole. The various modes in which the capſules are placed on the plant, in ſome of them are ſtrikingly different, and appear to form very diſtinct and ſatisfactory characters; but when as a tribe, they come to be more minutely inveſtigated, the characters of one are frequently loſt in thoſe of another, and a preciſe generic character is in vain ſought for.

In the preſent doubtful caſe we have adopted the name of LINNÆUS.

The deſcription of this plant given by WEIS, in his *Plant. Cryptog.* is ſo very accurate, that deſpairing of a better, we have in the preſent caſe adopted it; not however meaning to eſtabliſh it as a precedent: from originality we ſhall never ſwerve in our figures, nor in our deſcriptions, but as ſeldom as poſſible; taking care that whenever we do, it ſhall not be to the prejudice, but rather advantage of the work.

The *Oſmunda Spicant* grows plentifully in the environs of *Caen Wood*, near *Hampſtead-Heath*, the ſeat of Lord Mansfield; and produces its fructifications in July, Auguſt, and September.



Osmunda Spicant



Bryum viridulum



Bryum truncatulum

BRYUM TRUNCATULUM. BROWN BRYUM.

BRYUM *Linnæi Gen. Pl.* CRYPTOGAMIA MUSCI.

Raii Syn. Gen. 3. MUSCI.

BRYUM *truncatulum* antheris erectis ſubrotundis, operculo mucronato. *Lin. Syſt. Vegetab. p.* 798. *Sp. Pl.* 1584. *Fl. Suecic.* 391. *Dillen. Muſc.* 347. *t.* 45. *fig.* 7. *Raii Syn.* 94. *Hudſon Fl. Angl.* 408. *ed.* 2. *p.* 477. *Lightfoot. Fl. Scot. p.* 730.

CAULES ſimplices, breviſſimi, lineas tres raro ſuperantes, cæſpitoſi, *fig.* 1, 6.

FOLIA ovato-lanceolata, mucronata, *fig.* 13, ſplendentia, carinata, ſuperiora majora, in ſtellulam expanſa.

PEDUNCULI ſimplices, ſubinde bini, trium quatuorve linearum, purpuraſcentes.

CALYPTRA pallida, obliqua, acuminata, *fig.* 7, 8, 9, 10.

OPERCULUM primo roſtratum, obliquum, delapſâ calyptrâ contrahitur erectumque evadit, *fig.* 11, 12.

CAPSULA primo ovata, *fig.* 8, 9, flaveſcens, demum rufa, truncata, annulo ciliiſque deſtituta, *fig.* 11, 12.

Plantula microſcop. auct. *fig.* 14.

STALKS ſimple, very ſhort, ſeldom exceeding three lines, growing in tufts, *fig.* 1, 6.

LEAVES oval, lanceolate, terminating in a point, *fig.* 13, ſhining, with a projecting midrib; thoſe on the top of the ſtalk largeſt, with a ſtar-like expanſion.

PEDUNCLES ſimple, ſometimes growing two together, three or four lines in length, of a purpliſh colour.

CALYPTRA pale, oblique, and terminating in a long point, *fig.* 7, 8, 9, 10.

OPERCULUM, at firſt having a beak, placed obliquely on the capſule, on the falling off of the calyptra becoming ſhorter and upright, *fig.* 11, 12.

CAPSULE, at firſt oval, *fig.* 8, 9, of a yellowiſh colour, finally of a reddiſh brown, as it were cut off at top, and deſtitute of both ring and ciliæ, *fig.* 11, 12.

The whole plant magnified, *fig.* 14.

THE *Bryum truncatulum* is one of the leaſt of our *Moſſes*, and diſtinguiſhable at firſt ſight by the great number of its little brown heads, which, when the operculum falls off, have their margin entire, ſo that they appear as if cut acroſs, whence its name of *truncatulum*.

It is very common almoſt every where on banks, producing its fructifications from September to February.

It varies much in ſize.

HASSELQUIST, in his journey to *Paleſtine*, finding the *Walls* of *Jeruſalem* covered with this little plant, calls it *Hyſſopus Solomonis*, from a ſuppoſition that it was the plant which *Solomon* meant, when he ſpake of trees from the Cedar in Lebanon to the Hyſſop which ſpringeth out of the wall.

BRYUM VIRIDULUM. GREEN BRYUM.

BRYUM *viridulum* antheris erectis ovatis, foliis lanceolatis acuminatis imbricato-patulis. *Linnæi Syſt. Vegetab. p.* 798. *Sp. Pl.* 1584. *Fl. Suecic.* 1002. *Dillen. Muſc.* 380. *t.* 48. *fig.* 43. *Raii. Syn.* 97. *Hudſon. Fl. Angl.* 408. *ed.* 2. 487. *Lightfoot. Fl. Scot.* 731.

EXPL. FIG.

Fig. 1, 2, 3, 4, Plantæ nat. magnitud.

Fig. —— 5, 7, Plantæ auct.

Fig. —— 6, Folium auct.

Fig. 9, 10, 11, Capſulæ cum Calyptrâ.

Fig. —— 8, Calyptra ſeorſim exhibita.

EXPLAN. of FIG.

Fig. 1, 2, 3, 4, Plants of their natural ſize.

Fig. —— 5, 7, Plants magnified.

Fig. —— 6, a Leaf magified.

Fig. 9, 10, 11, Capſules with the Calyptra.

Fig. —— 8, The Calyptra exhibited ſeparately.

THIS ſpecies differs from the above in many particulars. It grows in cloſe ſoft tufts, which are in general larger, and of a more yellow hue; the ſtalks are frequently branched; the leaves are much finer, being nearly capillary; the mouth of the capſule, when the operculum falls off, is narrower than the middle, hence it bears a greater reſemblance to an egg, with the extremity cut off; while the *truncatulum* approaches more to the form of an urn. In the *viridulum*, the mouth is alſo very finely ciliated.

The *viridulum* grows in great abundance on the banks ſurrounding *Charlton Wood*; and produces its fructifications with the *truncatulum*.

Epilobium Tetragonum. Square-Stalk'd Willow-Herb.

EPILOBIUM *Linnæi Gen. Pl.* OCTANDRIA MONOGYNIA.

Cal. 4-fidus. *Petala* 4. *Capſ.* oblonga, infera. *Sem.* pappoſa.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.

EPILOBIUM *tetragonum* foliis lanceolatis denticulatis; caule tetragono; ſtigmate integerrimo.

EPILOBIUM foliis lanceolatis, denticulatis; imis oppoſitis, caule tetragono. *Lin. Syſt. Vegetab. p.* 297. *Sp. Plant.* 495.

EPILOBIUM foliis lanceolatis, glabris, dentatis. *Haller hiſt. p.* 426. *n.* 997.

CHAMÆNERION *tetragonum. Scopoli Flor. Carniol. p.* 271. 454.

LYSIMACHIA ſiliquoſa glabra media ſive minor. *Gerard emac.* 479.

LYSIMACHIA ſiliquoſa glabra minor. *Bauhin Pin.* 245. *Raii. Syn. p.* 311. 5. Middle ſmooth-leaved codded Willow-herb, or Looſeſtrife.

Hudſon Fl. Angl. ed. 1. *p.* 141. *ed.* 2. *p.* 162.

Lightfoot Fl. Scot. p. 198.

RADIX perennis, fibroſa, fibris albidis, ſtolonibus quotannis reparata, non vero repens.

ROOT perennial, fibrous, the fibres whitiſh, repaired yearly by new ſhoots, but not creeping.

CAULIS erectus, ſuperne valde ramoſus, bipedalis, rigidus, inferne purpuraſcens, ſubtetragonus, lævis.

STALK upright, at top much branched, about two feet high, ſtiff, at bottom purpliſh, ſmooth, and ſomewhat ſquare.

FOLIA ſubdecurrentia, unde caulis anguloſus, inferiora lanceolata, ſuperiora lineari-lanceolata, ſerrata, venoſa, glabra.

LEAVES ſomewhat decurrent, whence the angular appearance of the ſtalk; the lower ones lanceolate; the upper ones narrower, ſerrated, veiny, and ſmooth.

FLORES parvi, purpurei.

FLOWERS ſmall and purple.

CALYX: PERIANTHIUM quadripartitum, foliis lanceolato-acuminatis, pubeſcentibus, carinatis, apicibus rufis, *fig.* 1.

CALYX: a PERIANTHIUM divided into four ſegments, which are narrow and tapering to a point, downy, the midrib projecting on the under ſide, the tips reddiſh, *fig.* 1.

COROLLA: PETALA quatuor, purpurea, venis ſaturatioribus ſæpe ſtriata, calyce paulo longiora, emarginata, *fig.* 2.

COROLLA: four PETALS, purple, often ſtreaked with veins of a deeper colour, ſomewhat longer than the calyx, with a notch at top, *fig.* 2.

STAMINA: FILAMENTA octo, quorum quatuor breviora: ANTHERÆ flaveſcentes, *fig.* 3.

STAMINA: eight FILAMENTS, four long and four ſhort: ANTHERÆ yellowiſh, *fig.* 3.

PISTILLUM: GERMEN tetragonum, pubeſcens: STYLUS brevis, albus: STIGMA craſſum, album, *integerrimum*, *fig.* 4.

PISTILLUM: GERMEN ſquare, downy: STYLE ſhort and white: STIGMA thick, white, and *perfectly entire*, *fig.* 4.

PERICARPIUM: CAPSULA longiſſima, fere triuncialis, pedunculis triplo brevioribus inſidens.

SEED-VESSEL: a very long CAPSULE, approaching to three inches, ſitting on a flower-ſtalk thrice as ſhort.

SEMINA plurima, pappoſa.

SEEDS numerous and downy.

The preſent ſpecies of *Epilobium*, takes its name of *tetragonum* from the apparent ſquareneſs of its ſtalk, which however is not ſo completely ſquare as that of the *Hypericum quadrangulum*, but aſſumes rather an angular appearance, ariſing, as in many other plants, from projecting lines running from the leaves down the ſtalk: this however is one of the moſt ſtriking characters of this ſpecies: to which may be added the narrowneſs of its leaves, the uncommon length of its pods, and its undivided ſtigma*. Theſe are the peculiarities by which this plant may readily be diſtinguiſhed: but too much ſtreſs muſt not be laid on ſome of them.

The breadth of a leaf, its being placed on a peduncle, or ſitting cloſe to the ſtalk, are in general conſidered as excellent ſpecific characters; but in this plant, as well as ſome others, we have a proof of their fallibility; the leaves being ſometimes nearly as broad as thoſe of the *montanum*, and placed on foot-ſtalks of a conſiderable length. When I firſt accidentally met with this variety, I was led to conclude it to be a diſtinct ſpecies; but a careful attention to it, afterwards convinced me it was only a variety.

The *Epilobium tetragonum* is no uncommon plant with us; but is generally to be met with in watery ditches, by the ſides of roads; and where it does occur, it uſually abounds. Among a variety of other places, I have obſerved it in the lane leading from *Newington* to *Hornſey-Wood*.

It flowers with the other *Willow-herbs*.

The farmer has no reaſon to complain of it: nor is it celebrated in the annals of phyſic.

* This character ſeems firſt to have been noticed by RAY: his words are *Stylus non ut in præcedente quadrifidus eſt.* Hiſt. Pl. p. 861.



Epilobium tetragonum



Cerastium vulgatum

Ceraſtium Vulgatum. Common Mouſe-Ear-Chickweed.

CERASTIUM *Linnæi Gen. Pl.* DECANDRIA PENTAGYNIA.

Calyx 5-phyllus. *Petala* bifida. *Capſ.* unilocularis, apice dehiſcens.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

CERASTIUM *vulgatum* foliis oblongo-ovatis, hirſutis, caulibus diffuſis, hirſutie nudâ.

CERASTIUM *vulgatum* foliis ovatis, petalis calyci æqualibus, caulibus diffuſis. *Lin. Syſt. Vegetab. p.* 362. *Sp. Pl. p.* 627. *Fl. Suecic. n.* 415.

MYOSOTIS foliis ovato lanceolatis, petalis calycis longitudine. *Haller Hiſt. Helv. p.* 390. *n.* 893.

MYOSOTIS arvenſis hirſuta, parvo flore albo. *Vaillant. Paris.* 142. *t.* 30. *f.* 1.

ALSINE hirſuta magno flore. *Bauhin Pin.* 251.

AURICULA muris quorundam flore parvo, vaſculo tenui longo. *I. B.* III. 359.

ALSINE hirſuta myoſotis. *Adv.* 193. *Raii Syn. p.* 349, Narrow-Leaved Mouſe-ear-Chickweed.

Hudſon Fl. Angl. p. 175. *ed.* 2. *p.* 200.

Lightfoot Fl. Scot. p. 240.

RADIX perennis, fibroſa.

CAULES plurimi, diffuſi, teretes, purpuraſcentes, hirſuti, ramoſi.

FOLIA *hirſuta*, inferiora oblongo-ovata, baſi anguſtata, carinata, connata, ſuperiora ovata, marginibus ſubrevolutis.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovato-lanceolatis, margine membranaceis, apice purpuraſcentibus, hirſutis, *hirſutie nudâ ſive glandulis deſtituta, fig.* 1.

COROLLA: PETALA quinque, alba, obtuſe bifida, calyce plerumque longiora, baſi flaveſcentia, *fig.* 2.

STAMINA: FILAMENTA decem, filiformia, corolla breviora; alterna breviora: ANTHERÆ ſubrotundæ, flavæ, *fig.* 3.

PISTILLUM: GERMEN ovatum: STYLI quinque, capillares, albi, ad baſin ſenſim tenuiores: STIGMATA ſimplicia, *fig.* 4.

PERICARPIUM: CAPSULA ovato-cylindracea, membranacea, paululum recurvata, calyce duplo fere longior, ore decemdentato.

SEMINA plurima, flaveſcentia, ad lentem ſcabriuſcula, *fig.* 5, 6.

ROOT perennial and fibrous.

STALKS numerous, ſpreading, round, purpliſh, hirſute, and branched.

LEAVES *hirſute;* the lowermoſt of an oblong oval ſhape, narrowed at the baſe, midrib projecting on the under ſide, uniting around the ſtalk; the uppermoſt leaves oval, the edges ſomewhat rolled back.

CALYX: a PERIANTHIUM of five leaves, which are oval and pointed, membranous at the edges, and purpliſh at top, *covered with hairs which have no glands at their extremities, fig.* 1.

COROLLA: five white PETALS, bluntly notched at top, generally longer than the calyx, yellowiſh at bottom, *fig.* 2.

STAMINA: ten FILAMENTS, thread-ſhaped, and ſhorter than the corolla; the alternate ones ſhorteſt; ANTHERÆ roundiſh, and yellow, *fig.* 3.

PISTILLUM: GERMEN roundiſh: STYLES five, very ſlender and white, gradually leſſening to the bottom: STIGMATA ſimple, *fig.* 4.

SEED-VESSEL: a CAPSULE ovally-cylindrical, membranous, turning up a little, almoſt twice the length of the calyx, the mouth opening with ten teeth.

SEEDS numerous, yellowiſh, appearing roughiſh when magnified, *fig.* 5, 6.

The *Ceraſtium vulgatum* is often confounded with the two ſpecies already figured in this work; viz. the *viſcoſum* and *ſemidecandrum*. The attentive Botaniſt will, however, readily diſtinguiſh it; particularly when aſſiſted by the following obſervations.

Firſt, this ſpecies is certainly perennial; and although it has only a ſmall fibrous root, it continues through the winter, and from the ſame root throws out new ſhoots; while the other two are ſtrictly annual. Secondly, the hairs on the ſtalks, leaves, and calyx, are much longer and coarſer, than in either of the other two; and what particularly deſerves to be noticed, they are not terminated at the extremity by a viſcous globule, a character alone ſufficient to diſtinguiſh it. And thirdly, it is not only a larger and more ſpreading plant, but alſo with reſpect to ſituation more univerſally common.

It is ſubject to many variations; ſometimes being very hirſute, at other times but thinly covered with hairs; and it is ſaid to have been found by DOODY quite ſmooth*. It differs in ſize from an inch to two feet. In the breadth of its leaves alſo, like the *Polygonum aviculare*, it varies very conſiderably. The bloſſoms likewiſe are ſubject to vary in ſize. In general, the ſtronger the plant the ſmaller the petals, and *vice verſâ;* hence by the ſize of its petals alone, it is ſufficiently diſtinguiſhed on heaths, where it frequently grows about two inches in height, and is often taken for the *ſemidecandrum*.

The name given to this plant by Monſieur VAILLANT, is certainly improper; the petals being often twice as large as either of the other two. There is one point alſo in which LINNÆUS's obſervation does not accord with ours: in comparing the leaves with thoſe of the *viſcoſum*, he ſays they are *minus lanceolata magiſque ovata*, the reverſe of which is generally obſervable in our plant.

It comes fully into bloom about May; but may be found in bloſſom during the whole of the Summer. It grows not only on walls, but alſo by the ſides of roads, in meadows, and among rubbiſh. Like the other *Ceraſtiums*, it is not known to be particularly noxious in agriculture; nor has it any virtues to recommend it.

* *Raii Syn. ed.* 3. *p.* 349.

ADONIS AUTUMNALIS. PHEASANT'S-EYE.

ADONIS *Linnæi Gen. Pl.* POLYANDRIA POLYGYNIA.

Cal. 5-phyllus. *Petala* quinis plura abſque nectario. *Sem.* nuda.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

ADONIS *autumnalis* floribus octopetalis, fructibus ſubcylindricis. *Linnæi Syſt. Vegetab. p.* 427. *Sp. Pl. p.* 771.

ADONIS radice annua, flore octopetalo. *Haller hiſt. n.* 1158.

ADONIS *autumnalis. Scopoli Flor. Carniol. n.* 677.

ADONIS hortenſis, flore minore atrorubente. *Bauhin Pin.* 178.

FLOS ADONIS *Parkinſon Parad.* 293.

FLOS ADONIS flore rubro. *Gerard emac.* 387. *Raii Syn.* 251, Adonis Flower, Red Maithes. *Hudſon Fl. Angl. ed.* 2. *p.* 239.

RADIX annua, craſſitie digiti minimi, fuſiformis, paucis fibrillis inſtructa.

ROOT annual, the thickneſs of the little finger, tapering, furniſhed with few fibres.

CAULIS pedalis, erectus, ſubangulatus, fiſtuloſus, purpuraſcens, villoſus, ad baſin uſque ramoſus.

STALK about a foot high, upright, ſomewhat angular, hollow, purpliſh, hoary, branched quite to the bottom.

RAMI plurimi, ſparſi, cauli ſimiles, erecti, caulem primo florentem plerumque ſuperantes.

BRANCHES numerous, placed irregularly on the ſtalk, which they reſemble, upright, and generally taller than the ſtalk producing the firſt flower.

FOLIA alterna, e flavo viridia, infima petiolata, ſuprema ſeſſilia, pinnata, pinnis multifidis, capillaribus, acutis, ſubtus nitidis.

LEAVES alternate, of a yellowiſh green colour; the lower ones ſtanding on foot-ſtalks; the upper ones ſeſſile, pinnated; the pinnæ divided into numerous capillary ſegments, pointed, and ſhining on the under ſide.

CALYX: PERIANTHIUM pentaphyllum, foliolis ſubovatis, obtuſis, inæqualibus, concavis, purpureis, deciduis, corolla brevioribus, apicibus dentato-eroſis, *fig.* 1, 2.

CALYX: a PERIANTHIUM of five leaves, which are ſomewhat oval, obtuſe, unequal, hollow, purple, deciduous, ſhorter than the corolla, the tips appearing as if bitten, *fig.* 1, 2.

COROLLA: PETALA octo, raro plura, ſæpe pauciora, inæqualia, obcordata, coccinea, apice eroſa, baſi interne nigra, externe viridante, *fig.* 3, 4.

COROLLA: eight PETALS, ſeldom more, oftner fewer, unequal, inverſely heart-ſhaped, ſcarlet, the tip irregularly notched, the bottom internally black, externally greeniſh, *fig.* 3, 4.

STAMINA: FILAMENTA plurima, quadraginta circiter, filiformia, alba: ANTHERÆ ovatæ, obtuſæ, incurvatæ, compreſſæ, atropurpureæ: POLLEN croceum, *fig.* 5.

STAMINA: FILAMENTS numerous, about forty, thread-ſhaped, and white: ANTHERÆ oval, obtuſe, bending inward, flattened, of a blackiſh purple colour: POLLEN of a ſaffron colour, *fig.* 5.

PISTILLUM: GERMINA plurima, in capitulum breve ſubconicum imbricatim congeſta, erecta: STIGMATA acuta, reflexa, *fig.* 6, 7.

PISTILLUM: GERMINA numerous, upright, collected one over another into a ſhort head, ſomewhat conical: STIGMATA pointed, the points turned back, *fig.* 6, 7.

SEMINA ſubangulata, acuta, reticulato-rugoſa.

SEEDS, ſomewhat angular, pointed, with a kind of net-work wrinkled appearance.

The *Pheaſant's-Eye* has a peculiar claim to an inſertion in the *Flora Londinenſis*, as it is one of thoſe plants which are annually cried about our ſtreets, under the name of *Red Morocco:* it may nevertheleſs be doubted, whether it has not originally been conveyed from the garden to the dungheap, and from thence become an ornamental annual weed in many of the corn-fields in Kent, and other counties adjacent to London, in which it ſeems as much at home, as the *Ranunculus arvenſis*, or *Corn Crowfoot*.

There is no plant more variable in its Petals, both with reſpect to number and ſize; they therefore form a bad ſpecific character.

It flowers in May, and the ſeed is ripe in June; hence there appears an evident impropriety in calling this ſpecies *autumnalis:* it will moſt probably be found, that the *autumnalis* and *æſtivalis* are the ſame.

In the gardens (where it is common) it uſually flowers through great part of the ſummer.



Adonis autumnalis


Adoxa
Moschatellina

ADOXA MOSCHATELLINA. TUBEROUS MOSCHATEL.

ADOXA *Linnæi Gen. Pl.* OCTANDRIA TETRAGYNIA.

Cal. 2-fidus, inferus. *Cor.* 4-f. 5-fida, ſupera. *Bacca* 4-f. 5-locularis, calyce coalita.

Raii Syn. Gen. 16. HERBÆ BACCIFERÆ.

ADOXA *Moſchatellina. Linnæi Syſt. Vegetab. p.* 315. *Sp. Pl.* 527. *Fl. Suecic. p.* 132.

MOSCHATELLINA *Haller hiſt.* 429.

MOSCHATELLA *Adoxa. Scopoli. Fl. Carniol. p.* 281.

MOSCHATELLINA foliis fumariæ bulboſæ. *I. B.* 111. 206.

RANUNCULUS nemoroſus Moſchatella dictus. *Parkinſon* 226.

RANUNCULUS nemorum Moſchatellina dictus. *Bauhin Pin.* 178.

RADIX CAVA minima viridi flore. *Gerard emac.* 1091. *Raii Syn. p.* 268. Tuberous Moſchatel.

Hudſon Fl. Angl. ed. 2. *p.* 172.

Lightfoot Fl. Scot. p. 209.

Oeder Fl. Dan. ic. 139.

RADIX perennis, repens, dentata, alba.

ROOT perennial, creeping, toothed, and of a white colour.

FOLIA *radicalia* tria aut quatuor, tri-ternata, inciſa, glabra, lobis ovatis, mucronatis, *caulina* duo brevius petiolata, oppoſita.

LEAVES: *radical* leaves commonly three or four, triply ternate, deeply cut in, ſmooth, and ſhining; the ſegments or lobes oval, with a ſhort point: thoſe of the ſtalk two in number, ſtanding on ſhorter foot-ſtalks, and oppoſite.

CAULIS folia ſuperans, ſimplex, ſubtetragonus.

STALK ſomewhat taller than the leaves, ſimple, and nearly ſquare.

PEDUNCULUS quadrangularis, nudus, terminalis.

FLOWER-STALK ſquare, naked, and terminating the ſtalk.

CAPITULUM tetragonum, ex quatuor floribus verticillatis, quinto terminali.

HEAD ſquare, from the union of four of the flowers, and terminated by the fifth.

CALYX: PERIANTHIUM inferum, ſæpius triangulare, planum, perſiſtens, *fig.* 1.

CALYX: a PERIANTHIUM placed beneath the germen, moſt commonly triangular, flat, and permanent, *fig.* 1.

COROLLA monopetala, rotata, plana, quadrifida, aut quinquefida, laciniis ovatis, acutis, calyce longioribus, *fig.* 2, 3, 4.

COROLLA monopetalous, wheel-ſhaped, flat, divided into four or five ſegments, which are oval, pointed, and longer than the calyx, *fig.* 2, 3, 4.

STAMINA: FILAMENTA octo aut decem, ſubulata, longitudine calycis: ANTHERÆ flavæ, planæ, orbiculatæ, *fig.* 5.

STAMINA: eight or ten FILAMENTS, tapering, the length of the calyx: ANTHERÆ yellow, flat, and round, *fig.* 5.

PISTILLUM: GERMEN ſubrotundum, calyce cinctum: STYLI plerumque quatuor, ſimplices, erecti, longitudine ſtaminum, perſiſtentes: STIGMATA ſimplicia, *fig.* 6.

PISTILLUM: GERMEN roundiſh, ſurrounded by the calyx: STYLES generally four, ſimple, upright, the length of the ſtamina, permanent: STIGMATA ſimple, *fig.* 6.

PERICARPIUM: BACCA globoſa, viridis, quadrilocularis, cum calyce coalita, *fig.* 7.

SEED-VESSEL: a round BERRY of a green colour, having four cavities, and united to the calyx, *fig.* 7.

SEMINA ſolitaria, ovata, compreſſa, *fig.* 8.

SEEDS ſingle, oval, and flattened, *fig.* 8.

Some of the ancient Botaniſts conſidered this ſingular plant as a *Fumaria*, others as a *Ranunculus*, from the appearance of its foliage; but an attention to its fructification, ſhews it to be a plant altogether *ſui generis*.

It is one of the bacciferous plants of RAY, but its berries are rarely produced, and not to be diſcovered without a nice examination.

It varies much in the diviſions of its Calyx and Corolla, as well as in the number of its Stamina, even in the terminal flower.

In *Charlton-Wood* we find it abundantly, flowering in April and May.

VERONICA ARVENSIS. WALL SPEEDWELL.

VERONICA *Linnæi Gen. Pl.* DIANDRIA MONOGYNIA.

Cor. limbo 4-partito, laciniâ infimâ anguſtiore. *Capſula* bilocularis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

VERONICA *arvenſis* floribus ſolitariis, foliis cordatis inciſis pedunculo longioribus. *Lin. Syſt. Veg. p.* 57. *Sp. Pl. p.* 18.

VERONICA caule erecto, foliis ovatis, ſubhirſutis, dentatis; petiolis breviſſimis. *Haller hiſt. helv. n.* 548.

VERONICA *arvenſis. Scopoli Flor. Carniol. p.* 18.

ALSINE veronicæ foliis, floſculis cauliculis adhærentibus. *Bauhin Pin.* 250.

ALSINE foliis Veronicæ. *Gerard emac.* 6. 3.

ALSINE foliis ſubrotundis Veronicæ. *Parkinſon* 762.

VERONICA floſculis ſingularibus cauliculis adhærentibus. *Raii Syn. p.* 279, Speedwell Chickweed.

Oeder Fl. Dan. t. 515.

Hudſon Fl. Angl. 6. *ed.* 2. 6.

Lightfoot Fl. Scot. p. 75.

RADIX annua, fibroſa.

ROOT annual and fibrous.

CAULIS palmaris, aut dodrantalis, erectus, plerumque ramoſus, ſubinde ſimplex (rami alternatim oppoſiti, adſcendentes) teres, purpuraſcens, undique hirſutus.

STALK upright, from three to nine inches in heighth, generally branched, now and then ſimple, (the branches alternately oppoſite and aſcending) round, purpliſh, and hirſute on every ſide.

FOLIA inferiora petiolata, hirſuta, ſubcordata, inferne ſæpe purpurea, obtuſa, planiuſcula, inciſa, quinquenervia, ſuperiora ſeſſilia, ſubtortuoſa.

LEAVES on the bottom of the ſtalk ſtanding on foot-ſtalks, hirſute, ſomewhat heart-ſhaped, often purple on the under ſide, obtuſe, flattiſh, notched on the edges, having five ribs, the upper ones ſeſſile, and ſomewhat twiſted.

FLORES pedunculis breviſſimis inſidentes, ſpicati, bractæâ lanceolatâ ſuffulti.

FLOWERS ſitting on very ſhort foot-ſtalks, growing in a ſpike, ſupported by a lanceolate floral-leaf.

CALYX: PERIANTHIUM quadripartitum, laciniis ovato-lanceolatis, hirſutulis, hirſutie glanduloſâ, duabus inferioribus duplo fere majoribus et longioribus, *fig.* 1.

CALYX: a PERIANTHIUM deeply divided into four ſegments, which are oval, lanceolate, and hairy (the hairs terminated with glands); the two lowermoſt almoſt twice as large and long as the others, *fig.* 1.

COROLLA monopetala, ſubrotata, cœrulea, leviſſimo tactu decidua, tubus breviſſimus, albus, limbus quadripartitus, laciniis ovatis, infimâ anguſtiore, *fig.* 2.

COROLLA monopetalous, and ſomewhat wheel-ſhaped, of a blue colour, falling off on the leaſt touch; the tube very ſhort and white; the limb deeply divided into four ſegments, which are oval, the lower one narroweſt, *fig.* 2.

STAMINA: FILAMENTA duo, alba, medio craſſiora, corollâ dimidio breviora: ANTHERÆ ſubcordatæ, flaveſcentes, *fig.* 3.

STAMINA: two white FILAMENTS thickeſt in the middle, half the length of the corolla: ANTHERÆ ſomewhat heart-ſhaped, and yellowiſh, *fig.* 3.

PISTILLUM: GERMEN obcordatum, compreſſum, viſcoſum, baſi glandulâ cincto: STYLUS breviſſimus, albus, rectus: STIGMA craſſum ſubtruncatum, *fig.* 4.

PISTILLUM: GERMEN inverſely heart-ſhaped, flattened, and viſcous, ſurrounded at bottom by a gland: STYLE very ſhort, white, and ſtraight; STIGMA thick, with an appearance of being cut off, *fig.* 4.

PERICARPIUM: CAPSULA obcordata, compreſſa, pallide fuſca, *fig.* 5, continens

SEED-VESSEL: a heart-ſhaped flattened CAPSULE, of a pale brown colour, *fig.* 8, containing

SEMINA circiter 14 ovata, compreſſa, medio depreſſa, *fig.* 6, 7.

SEEDS about fourteen, which are oval and flat, with a depreſſion in the middle, *fig.* 6, 7.

As the *Veronica agreſtis* grows chiefly in gardens and cultivated ground, ſo this ſpecies, which is nearly allied to it, is moſt commonly found on walls, alſo in fallow fields, and on the borders of of dry paſtures.

It flowers in April, and the ſeeds ripen in May.

The old Botaniſts, inattentive to the parts of fructification, diſtinguiſhed this and ſome other ſpecies of Veronica, by the general name of *Alſine.*

Students are apt, as we have before obſerved, to confound it with the *agreſtis,* from which it differs in many reſpects: the ſtalk in particular is upright; the flowers are nearly ſeſſile; the ſeed-veſſels are much ſmaller, and, when ripe, form a ſpike.

It varies in ſize from one to ſix or eight inches; and on walls, the bottom leaves are frequently obſerved to be purple.



Veronica arvensis



Sagina erecta

Sansom Sculp

SAGINA ERECTA. UPRIGHT PEARLWORT.

SAGINA *Linnæi Gen. Pl.* TETRANDRIA TETRAGYNIA.

Cal. 4-phyllus. *Petala* 4. *Capſ.* 1-locularis, 4-valvis, polyſperma.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

SAGINA *erecta* caule erecto ſubunifloro. *Lin. Syſt. Vegetab. p.* 142. *Sp. Pl. p.* 185.

ALSINELLA foliis caryophylleis. *Cat. Giſs.* 47.

SAGINA ſcapis unifloris. *Guett. Stamp. p.* 276. *Dalib. Paris. p.* 56.

ALSINE verna glabra. *Magn. Monſp.* 14. *Vaill. Paris.* 6. *t.* 3. *fig.* 2. *Raii Syn. fig.* 4. *t.* 15. *p.* 344. The Leaſt Stitchwort.

Hudſon Fl. Angl. ed. 2. *p.* 73.

Lightfoot Fl. Scot. p. 125.

RADIX annua, ſimplex, fibroſa.

CAULES plerumque plures, ſupra terram expanſi, aſcendentes, bi aut triunciales, teretes, purpuraſcentes, læves, geniculati, uniflori, biflori aut etiam triflori.

FOLIA glauca, inferiora linearia, ſeſſilia, rigida, lineâ longitudinali exarata, caulina connata, ſæpe recurvata, latiora, magiſque acuminata.

CALYX: PERIANTHIUM tetraphyllum, perſiſtens, foliolis ovato acuminatis, erectis, plerumque clauſis, margine membranaceis albidis, lævibus, glaucis, *fig.* 1.

COROLLA: PETALA quatuor calyce breviora, alba, oblonga, obtuſa, ſubſtriata, apice indiviſa, *fig.* 2, auct.

STAMINA: FILAMENTA quatuor, intra petala locata, petalis paulo breviora, ſetacea: ANTHERÆ ſubrotundæ, didymæ, flaveſcentes, *fig.* 3, 4.

PISTILLUM: GERMEN ovatum: STYLUS breviſſimus, longitudine ſtaminum: STIGMATA quatuor, villoſa, reflexa, *fig.* 5, 6.

PERICARPIUM: CAPSULA oblongo ovata, membranacea, unilocularis, univalvis, calyce paulo longior, ore plerumque decemdentato, *fig.* 7, 9. *fig.* 8, auct.

SEMINA plurima, e fuſco aurantiaca; ſubreniformia, ſcabra, *fig.* 10, 11.

ROOT annual, ſimple, and fibrous.

STALKS for the moſt part ſeveral, expanded on the earth, and afterwards riſing upright, from two to three inches high, round, purpliſh, ſmooth, jointed, ſupporting from one to three flowers.

LEAVES glaucous; the lower ones linear, ſeſſile, rigid, grooved; thoſe on the ſtalk uniting at their baſe, often bent back, broader, and more pointed.

CALYX: a PERIANTHIUM of four leaves, permanent, the leaves oval and pointed, upright, generally cloſed, membranous and whitiſh on the edges, ſmooth and glaucous.

COROLLA: four PETALS ſhorter than the calyx, white, oblong, obtuſe, ſomewhat ſtriated, and undivided at top, *fig.* 2. magnified.

STAMINA: four FILAMENTS placed between the petals, and a little ſhorter than the petals, ſetaceous: ANTHERÆ roundiſh, double, of a yellowiſh colour, *fig.* 3, 4.

PISTILLUM: GERMEN oval: STYLE very ſhort, the length of the ſtamina: STIGMATA four, villous, and turning back, *fig.* 5, 6.

PERICARPIUM: an oblong, oval, membranous CAPSULE, of one cavity and one valve, a little longer than the calyx, the mouth opening generally with ten teeth, *fig.* 7, 9. *fig.* 8, magnified.

SEEDS numerous, of an orange brown colour, ſomewhat kidney-ſhaped, and rough on the ſurface, *fig.* 10, 11.

In treating of this little plant, we have been rather at a loſs whether to conſider it as a new genus, or arrange it with the *Sagina* of LINNÆUS: for though it agrees with the *Sagina* in ſome of its moſt ſtriking characters, ſuch as having a Calyx and Corolla, each conſiſting of four leaves, together with four Stamina and Piſtilla, yet in its ſeed-veſſels, which probably LINNÆUS might not have ſeen in a perfect ſtate, it greatly reſembles a *Ceraſtium;* while the whole plant, in its habit and glaucous appearance, approaches nearly to the *Stellaria Holoſtea.* As there are but few genera however, whoſe ſpecies do not vary conſiderably in the parts of fructification, we have thought it moſt eligible to continue it a *Sagina;* eſpecially as it retains thoſe characters, which obviouſly diſtinguiſh it from any of the Decandrous plants.

We meet with it abundantly on moſt of the Heaths about London, particularly on *Blackheath.* It flowers in April, and ripens its ſeed in May. The Calyx never opens far, ſo that the bloſſoms are not ſuffered fully to expand.

If the ſeaſon prove dry, as hath been moſt unuſually the caſe this year, 1779, the ſtalk is generally ſimple; but if the ground be moiſt, it throws out many ſtalks, which firſt ſpread on the earth, and afterwards become upright, as is repreſented in the middle figure.

Chryſoſplenium Oppoſitifolium. Common Golden Saxifrage.

CHRYSOSPLENIUM *Linnæi Gen. Pl.* DECANDRIA DIGYNIA.

Cal. 4-ſ. 5-fidus, coloratus. *Cor.* 0. *Caps.* 2-roſtris, 1 locularis, polyſperma.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

CHRYSOSPLENIUM *oppoſitifolium* foliis oppoſitis. *Lin. Syſt. Vegetab. p.* 342. *Sp. Pl.* 569.

CHRYSOSPLENIUM foliis conjugatis. *Haller. Hiſt. No.* 1549.

SAXIFRAGA rotundifolia aurea. *Bauhin. pin. p.* 309.

SAXIFRAGA aurea. *Ger. emac.* 841. *Parkinſon* 425. *Raii Syn.* 158. Golden Saxifrage.
Hudſon Fl. Angl. p. 156.
Oeder Fl. Dan. ic. 365.
Lightfoot Fl. Scot. p. 220.

RADICES perennes, fibroſæ, capillares.

CAULES baſi repentes, quadrati, tenerrimi, erecti, palmares et ultra, pilis raris hirſuti; ramoſi, ſuperne dichotomi.

FOLIA oppoſita, connata, petiolata, patentia, ſubrotunda, pilis raris albidis hirſuta, dentato-crenata, ſubcarnoſa, e flavo vireſcentia, ſubtus albida, ſuprema profundius crenata.

FLORES flavi, ſeſſiles, ſummis ramis inſidentes, corymboſi, faſtigiati.

CALYX: PERIANTHIUM quadripartitum, rarius quinquepartitum, patens, flavum, perſiſtens; laciniis ovatis, ſubæqualibus, *fig.* 1, 2.

COROLLA nulla.

STAMINA: FILAMENTO octo, (in ſupremo flore decem aliquando obſervantur,) ſubulata, erecta, longitudine fere calycis: ANTHERÆ didymæ, ſubrotundæ, flavæ, *fig.* 3, 4.

NECTARIUM ſquamula crenulata germen cingens, *fig.* 5.

PISTILLUM: GERMEN inferum, deſinens in STYLOS duos, ſubulatos, longitudine ſtaminum: STIGMATA obtuſa, *fig.* 6.

PERICARPIUM: CAPSULA biroſtris, bipartita, unilocularis, bivalvis, calyce viridi cincta.

SEMINA plurima, minuta, aurantiaca.

ROOTS fibrous, capillary, and perennial.

STALKS creeping at bottom, ſquare, very tender, upright, about four inches in height, beſet with a few ſtiffiſh hairs, branched, and forked at top.

LEAVES oppoſite, connate, ſtanding on foot-ſtalks, ſpreading, of a roundiſh figure, beſet with a few white ſtiffiſh hairs, indented or crenated at the edges, ſomewhat fleſhy, of a yellowiſh green colour, but whitiſh underneath; the uppermoſt leaves more deeply notched.

FLOWERS yellow, ſeſſile, ſitting on the tops of the branches, forming a corymbus perfectly flat at top.

CALYX: a PERIANTHIUM divided into four ſegments, ſeldom into five, ſpreading, of a yellow colour, and continuing; the ſegments ovate, and nearly equal, *fig.* 1, 2.

COROLLA wanting.

STAMINA: eight FILAMENTS, (in the top flower ten are ſometimes obſervable,) tapering, upright, almoſt the length of the calyx: ANTHERÆ double, roundiſh, and yellow, *fig.* 3, 4.

NECTARY a ſcale with a crenated edge, ſurrounding the germen, *fig.* 5.

PISTILLUM: GERMEN placed below the calyx, ending in two tapering STYLES, the length of the Stamina: STIGMATA blunt, *fig.* 6.

SEED-VESSEL; a CAPSULE having two beaks or horns, dividing in the middle, of one cavity, and two valves, ſurrounded by a green Calyx.

SEEDS numerous, minute, of an orange colour.

THE antient botaniſts ſhewed no ſmall botanic diſcernment in conſidering this plant as a *Saxifraga*; and although in ſtrict propriety it may be neceſſary to form a different genus of it, yet its affinity muſt be confeſſed to be very great.

The part which LINNÆUS calls the *Receptaculum angulatum*, appears to be more properly a kind of *Nectarium*; the Stamina proceed from beneath, not out of it.

As the terminal flower in this plant is rarely divided into more than four ſegments, and has only eight Stamina, it would perhaps be more proper to place it in the claſs OCTANDRIA.

It grows in great abundance in the boggy part of *Charlton Wood*; and flowers in April. The ſeeds ripen in May.

Authors are ſilent as to its uſeful or noxious qualities.



Chrysosplenium oppositifolium

Sansom Sculp



Tussilago Petasites

Sansom Sculp

TUSSILAGO PETASITES. BUTTERBUR.

TUSSILAGO *Lin. Gen. Pl.* SYNGENESIA POLYGAMIA SUPERFLUA.

Recept. nudum. *Pappus* ſimplex. *Cal.* ſquamæ æquales, diſcum æquantes, ſubmembranaceæ.

Raii Syn. Gen. 7. HERBÆ FLORE COMPOSITO, SEMINE PAPPOSO NON LACTESCENTES FLORE DISCOIDE.

TUSSILAGO *Petaſites* Thyrſo ovato, floſculis omnibus hermaphroditis. *Lin. Sp. Pl. p.* 1215. *Fl. Suecic. n.* 746.

PETASITES floribus denſe ſpicatis, floſculis androgynis. *Haller hiſt. n.* 143.

TUSSILAGO *Petaſites. Scopoli Fl. Carn. n.* 1058.

PETASITES major et vulgaris. *Bauh. p.* 197.

PETASITES *Gerard emac.* 814.

PETASITES vulgaris. *Parkinſon.* 419. *Raii Syn. p.* 179, Butterbur, Peſtilent-wort. *Hudſon. Fl. Angl.* 351. *ed.* 2. 364. *Lightfoot. Fl. Scot.* 477.

RADIX perennis, repens, albida, craſſitie digiti, multo etiam major in adultis plantis, horizontalis, fibras plurimas prælongas dimittens, verſus apicem ſenſim incraſſatas.

PETIOLI radicales, teretiuſculi, ſtriati, villoſi, canaliculati, baſi vaginati, purpuraſcentes.

FOLIA cordata, rotundata, margine inæqualiter dentata, denticulis rufis, inferne ſubtomentoſa, defloratâ plantâ increſcentia, tandem ampliſſima.

SCAPUS radicalis, ſpithamæus, teres, fiſtuloſus, albidus, tomentoſus, adſperſus ſquamis lanceolatis, purpuraſcentibus, nervoſis, inferioribus foliolo crenulato terminatis.

THYRSUS primum ovatus, dein oblongus, demum ſubconicus, pedunculis unifloris, bractæatis.

BRACTEÆ ad baſin pedunculorum lanceolatæ, apice purpuraſcentes, delicatulæ, longitudine pedunculi, *fig.* 1.

CALYX communis, turbinatus, lævis, ſquamis ſubæqualibus, lanceolatis, apice ſubincurvatis, *fig.* 2.

COROLLA compoſita; *corollulæ* omnes hermaphroditæ, tubuloſæ, *propria* pallide purpurea, infundibuliformis, tubo filiformi, elongato, limbo campanulato, quinquefido, laciniis reflexis, *fig.* 3.

ANTHERÆ purpureæ, in tubum coalitæ, *fig.* 4.

PISTILLUM: GERMEN teres, nudum: STYLUS albidus, antheris longior: STIGMA craſſum, album, bifidum, *fig.* 5.

SEMINA oblonga, marcida, nigricantia, ſterilia, pappo ſimplici coronata, *fig.* 6.

RECEPTACULUM nudum.

ROOT perennial, creeping, whitiſh, the thickneſs of ones finger, or much larger in full grown plants, running horizontally, and ſending down numerous long fibres, which grow thicker towards the extremity.

LEAF-STALKS proceeding from the root, roundiſh, ſtriated, villous, hollow on the inſide, forming a ſheath at bottom, and purpliſh.

LEAVES heart-ſhaped, rounded, the edge unequally indented, the teeth reddiſh, underneath ſomewhat woolly, growing very large after the plant has flowered.

SCAPUS proceeding from the root, about ſeven inches high, round, hollow, whitiſh, woolly, covered with lanceolate ſcales or leaves of a purpliſh colour, ribbed, the lower ones often terminating in a ſmall notched leaf.

THYRSUS firſt oval, then oblong, laſtly nearly conical: the flower-ſtalks ſupporting one flower each, and furniſhed with floral-leaves.

FLORAL-LEAVES at the baſe of the flower-ſtalks lanceolate, purpliſh at top, delicate, and the length of the flower-ſtalk, *fig.* 1.

CALYX common to many florets, broad at top, and ſmall at bottom, ſmooth, the ſcales or leaves nearly equal, lanceolate, and bending in ſomewhat at top, *fig.* 2.

COROLLA compoſed of many florets, all of which are hermaphrodite and tubular, of a pale purple colour, and funnel-ſhaped; the tube long and ſlender; the brim bell-ſhaped, divided into five ſegments, which are turned back, *fig.* 3.

ANTHERÆ purple, united into a tube, *fig.* 4.

PISTILLUM: GERMEN round and naked: STYLE whitiſh, longer than the Stamina: STIGMA thick, white, and bifid, *fig.* 5.

SEEDS oblong, withered, blackiſh, ſterile, crowned with ſimple down, *fig.* 6.

RECEPTACLE naked.

THE *Butterbur* though differing widely from the *Coltsfoot* in the appearance of its bloom, yet agrees with it in many particulars; the root eſpecially, poſſeſſes the ſame power of increaſing the plant, by creeping under the earth to a very great diſtance; hence when once introduced into a garden, it is ſcarce to be rooted out, eſpecially if the ſoil be a moiſt one. Was it not for this pernicious effect, the beautiful mode of its flowering, joined to its early appearance, would entitle it to a place in the gardens of the curious.

The bloſſoms, like thoſe of the *Coltsfoot*, make their appearance before the leaves. If the ſpring be mild, the ſpike will be formed by the middle of March; but April is the month in which it oftener blows.

It does not, like the *Coltsfoot*, expand its pappus or down, but the flowers change to a dirty brown colour; and the ſeeds on examination, appear altogether barren. It appears difficult to account for the cauſe of this ſterility, as the parts of the fructification ſeem evidently perfect.

This loſs is however amply ſupplied in another way, as will be evident from the following experiment.

April the 1ſt. 1778, I planted in my garden a piece of the *Butterbur* root, two inches long, the thickneſs of the little finger, with a tuft of leaves to it. November the 3d. 1779, this root with its increaſe, was dug up, many of the ſhoots had extended themſelves to the diſtance of ſix feet, and penetrated two feet in depth; the whole waſhed from the ſurrounding dirt, weighed eight pounds.

A very ingenious Swediſh botaniſt informed me, that the early appearance of this plant, induced the rural oeconomiſt in *Sweden*, to plant it near their bees, who reſort much to its bloſſoms. The above experiment ſhews that this cuſtom ſhould be adopted with caution, ſince where this plant abounds, the ground is ſo ſhaded with its ample leaves, as to produce few others.

The ſoil in which it flouriſhes moſt is a moiſt one, hence it is moſt commonly found on the banks of rivers and ſtreams. Near London it grows on the north ſide of the River Thames, betwixt *Weſtminſter Bridge* and *Chelſea*.

Formerly it was a medicine of great repute in peſtilential and other fevers; but in the modern practice it is but little regarded.

POA RIGIDA. HARD MEADOW-GRASS.

POA *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

POA *rigida* panicula lanceolata ſubramoſa ſecunda: ramulis alternis ſecundis. *Linn. Syſt. Vegetab. p.* 98.

GRAMEN panicula multiplici. *Bauhin. Pin. p.* 3.

GRAMEN exile duriuſculum in muris et aridis proveniens. *Raii Syn.* 410, Small Hard Graſs.

GRAMEN loliaceum murorum duriuſculum ſpica erecta rigida. *Hiſt. Oxon. III.* 182. *t.* 2. *fig.* 9.

GRAMEN minus duriuſculum. *Gerard.*

GRAMEN arvenſe, filicinâ, duriore panicula, gracilius. *Barrel. Ic.* 49.

Scheuchz. Agroſt. ed Haller. p. 271. *t.* 6. *fig.* 2. 3. ſpiculæ tantum.

Hudſon Fl. Angl. p. 35. *ed.* 2. *p.* 42.

RADIX annua, paucis fibrillis inſtructa.

CULMI plures, palmares, erecti, ad baſin infracti, plerumque ſimplices, læves, binodes.

FOLIA lanceolata, lævia, longitudine vaginæ, ſuberecta; *Membrana* brevis, obtuſa, apice lacera; *Vagina* lævis, lineata.

PANICULA lanceolata, ſeſquiuncialis, paululum recurvata, rigida, ſubſecunda.

SPICULÆ lineari-lanceolatæ, ſuboctofloræ, acutæ, ſubcompreſſæ, *fig.* 1.

CALYX: GLUMA bivalvis, valvulæ longitudine et magnitudine inæquales, ad lentem ſcabriuſculæ, *fig.* 2.

COROLLA: GLUMA bivalvis, valvulæ ſubæquales, ovato-acutæ, marginibus membranaceis, *fig.* 3.

STAMINA: FILAMENTA tria, capillaria. longitudine Corollæ: ANTHERÆ flavæ, minimæ, breves, utrinque furcatæ, *fig.* 4, 5.

NECTARIA: GLUMULÆ duæ, ovato-acutæ, longitudine Germinis, ope microſcopii viſibiles, *fig.* 6.

PISTILLUM: GERMEN turbinatum: STYLI duo ad baſin uſque ramoſi, *fig.* 7, 8.

SEMINA ovato-acuta, hinc convexa, inde concava.

ROOT annual, and furniſhed with few fibres.

STALKS ſeveral, about four inches high, upright, crooked at bottom, generally ſimple, ſmooth, with two knots or joints.

LEAVES lanceolate, ſmooth, the length of the ſheath, and nearly upright; *Membrane* at the baſe of the leaf ſhort, obtuſe, and jagged at top; *Sheath* ſmooth, and very finely grooved.

PANICLE lanceolate, about an inch and a half long, bent a little back, rigid, the ſpiculæ in ſome degree growing one way.

SPICULÆ of a ſhape betwixt linear and lanceolate, containing for the moſt part eight flowers, pointed and flattiſh *fig.* 1.

CALYX: a GLUME of two valves, the valves unequal in length and ſize, appearing roughiſh when viewed with a magnifier, *fig.* 2.

COROLLA: a GLUME of two valves, the valves nearly equal, of an oval pointed ſhape, the edges membranous, *fig.* 3.

STAMINA: three FILAMENTS, fine, the length of the Corollæ; ANTHERÆ yellow, very minute, ſhort, and forked at each end, *fig.* 4, 5.

NECTARIES: two ſmall GLUMES of an oval pointed ſhape, the length of the Germen, viſible by the help of a microſcope, *fig.* 6.

PISTILLUM: GERMEN larger at top than at bottom: STYLES two, branched down to the bottom, *fig.* 7, 8.

SEEDS of an oval pointed ſhape, convex on one ſide, and hollow on the other.

Neither HALLER nor SCOPOLI make any mention of this graſs. According to SCHEUCHZER, it is common in *Italy* and *France*, in dry fields, and ſometimes on walls: with us it is found more frequently on the latter; and though not ſo common as ſome of the graſſes, yet it is to be found on moſt of the walls about London, in May and June.

In very dry and barren ſituations, the ſtalks ſometimes are found ſimple, the panicle alſo not branched, and the ſpiculæ, inſtead of containing about eight flowers, which is the uſual number, have no more than three or four: in this ſtate SCHEUCHZER makes another ſpecies of it: this alteration, from an exceſs or ſcantineſs of nouriſhment, is what all plants are ſubject to; and no circumſtance ſeems to have been leſs regarded by Botaniſts—To form ſpecies or varieties from ſuch a cauſe, is to multiply plants without end. A compleat knowledge of a plant, is only to be attained by obſerving it at the different periods of its growth, in all the various ſituations in which it occurs—Information obtained from any other ſource is not to be depended on.


Poa rigida
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Sansom Sculp.



Erysimum alliaria

ERYSIMUM ALLIARIA. SAUCE-ALONE.

ERYSIMUM *Linnæi Gen. Pl.* TETRADYNAMIA SILIQUOSA.

Siliqua columnaris, exacte tetraëdra. *Cal.* clauſus.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

ERYSIMUM *Alliaria* foliis cordatis. *Linnæi Syſt. Vegetab. p.* 499. *Sp. Pl. p.* 923. *Fl. Suecic. n.* 600.

ERYSIMUM *Haller Hiſt. p.* 208. *n.* 480.

SISYMBRIUM *Alliaria. Scopoli Fl. Carn. n.* 825.

ALLIARIA *Bauhin Pin.* 110. *Gerard emac.* 796. *Parkinſon* 112.

HESPERIS allium redolens. *Raii Syn.* 293. Jack by the Hedge, or Sauce-alone.

Hudſon. Fl. Angl. ed. 2. *p.* 286.

Lightfoot Fl. Scot. 186.

RADIX biennis, albida, fuſiformis, plurimis fibrillis inſtructa.

CAULIS erectus, bi aut tripedalis, teres, lævis, ſubſtriatus, inferne purpureus, villoſus, ſuperne ramoſus.

RAMI pauci, alterni, erecti.

FOLIA alterna, petiolata, cordata, venoſa, ſubrugoſa, inferiora longius petiolata, rotundata, ſuperiora acuta, inæqualiter dentato-ſerrata.

FLORES nivei, terminales, erecti, pedunculis longitudine florum inſidentes.

CALYX: PERIANTHIUM tetraphyllum, foliolis oblongis, pallide vireſcentibus, obtuſis, deciduis, apice interne concavis, externe gibbis, *fig.* 1.

COROLLA: PETALA quatuor, obovata, unguiculata, unguis erectus, linearis, limbus patens, venis paucis exaratus, *fig.* 2.

STAMINA: FILAMENTA ſex, ſubulata, alba, duo breviora incurvata, quatuor longiora erecta, longitudine Styli, *fig.* 3, 6: ANTHERÆ oblongæ, cordatæ, flavæ, incumbentes, erectæ, *fig.* 4, 5.

NECTARIUM: glandula rotunda ſolitaria utrinque ad baſin Staminum longiorum, baſis vero Staminum breviorum glandulâ cingitur.

PISTILLUM: GERMEN obſcure tetragonum, oblongum, *fig.* 7: STYLUS breviſſimus, *fig.* 8: STIGMA capitato-truncatum.

PERICARPIUM: SILIQUA biuncialis, teres, ſubtetragona, lineata, bilocularis, bivalvis, *fig.* 9.

SEMINA plurima, oblonga, fuſca, nitida, ſtriata, utrâque extremitate oblique truncatâ, diſſepimento utrinque nidulantia, *fig.* 10.

ROOT biennial, of a whitiſh colour, tapering, and furniſhed with numerous fibres.

STALK upright, from two to three feet high, round, ſmooth, ſomewhat ſtriated, at bottom purple, and ſlightly hoary, at top branched.

BRANCHES few, alternate, and upright.

LEAVES alternate, ſtanding on foot-ſtalks, heart-ſhaped, veiny, and ſomewhat wrinkled; the lower ones ſtanding on long foot-ſtalks, and round at the tips; the upper ones pointed, and unequally toothed or ſawed.

FLOWERS white, terminal, upright, ſtanding on ſtalks the length of the flowers.

CALYX: a PERIANTHIUM of four leaves, which are oblong, of a pale green, obtuſe, the tips internally concave, externally gibbous, *fig.* 1.

COROLLA: four PETALS, inverſely oval, and clawed; the claw erect and linear; the limb ſpreading, and grooved with a few veins, *fig.* 2.

STAMINA: ſix FILAMENTS tapering, and white; the two ſhorter ones bending inwards; the four longer ones upright, the length of the Style, *fig.* 3, 6: ANTHERÆ of an oblong heart ſhape, yellow, incumbent, and upright, *fig.* 4, 5.

NECTARY, a ſmall round ſingle gland, placed on each ſide at the baſe of the longeſt Stamina; but the baſe of each of the ſhorteſt Stamina, is wholly ſurrounded by a glandular ſubſtance.

PISTILLUM: the GERMEN obſcurely four corner'd, and oblong, *fig.* 7: STYLE very ſhort, *fig.* 8: STIGMA, forming a little head, appearing as if cut off.

SEED-VESSEL: a POD about two inches long, round, obſcurely quadrangular, with a fine prominent line between each angle, of two cavities and two valves, *fig.* 9.

SEEDS numerous, oblong, brown, ſhining, finely grooved, obliquely cut off at each end, and partly buried in the diſſepimentum on each ſide, *fig.* 10.

THE whole of this plant, on being rubbed, diſcovers a ſtrong ſmell of Garlic, whence its name of *Alliaria.*

Medicinally, the leaves are recommended internally, as ſudorifics and deobſtruents, ſomewhat of the nature of Garlic, but much milder; and externally, as antiſeptics, in gangrenes and cancerous ulcers: *Lewis's Diſp. p.* 78.

Dietically it is uſed in ſauces; and by the country people eaten with bread and butter: *Raii Hiſt. Pl. et Syn.*

The ſeeds bruiſed, and put up the noſtrils, are ſaid to promote ſneezing: *Raii Hiſt. Pl. p.* 792.

The *Curculio Alliariæ, Linn. Faun. Suecic. n.* 580, perforates and dwells in the ſtalks of this plant: *Fl. Suecic.*

If eaten by Cows, which it appears to be from LINNÆUS's experiments, it will be liable to give a diſagreeable taſte to the milk; ſhould this happen, the Farmer will eaſily deſtroy it, as it is a biennial.

It grows very common by hedge ſides; flowers in April and May.

SCOPOLI obſerves that it does not retain the generic character of an *Eryſimum*, wherefore he arranges it as a *Siſymbrium.*

GLECHOMA HEDERACEA. GROUND-IVY.

GLECHOMA *Linnæi. Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Antherarum ſingulum par in formam crucis connivens. *Calyx* 5-fidus.

Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

GLECHOMA *hederacea. Lin. Syſt. Vegetab. p.* 445. foliis reniformibus crenatis. *Spec. Pl. p.* 807. *Fl. Suecic. p.* 202.

CHAMÆCLEMA caule procumbente radicato, foliis reniformibus rotunde crenatis. *Haller hiſt. n.* 245.

CALAMINTHA *hederacea. Scopoli. Fl. Carniol. p.* 423.

CALAMINTHA humilior, folio rotundiore. *Tourn. Inſt. R. H.* 194.

HEDERA terreſtris. *Bauhin. Pin.* 306.

HEDERA terreſtris. *Gerard. emac.* 856.

HEDERA terreſtris vulgaris. *Parkinſon.* 676. *Raii Syn. p.* 296, Ground-ivy, Gill-go-by-ground, Alehoof, or Tunhoof. *Hudſon. Fl. Angl. p.* 224.

RADIX perennis, fibroſa.

CAULES ſeu potius Flagellæ plures, tetragoni, humi repentes et late ſe diffundentes, unde exſurgunt caules floriferi palmares aut ſemipedales, quadrati, hirſuti, (pilis deorſum verſis,) erecti, infirmi, geniculati, geniculis piloſis.

FOLIA oppoſita, longe petiolata, ſubreniformia, crenata, venoſa, petiolis ſuperne ſulcatis.

FLORES purpurei, verticillatim circa caulem diſpoſiti.

PEDUNCULI triflori.

INVOLUCRUM univerſale et partiale, *fig.* 2, 3, diphyllum, ſetaceum, ſed in floſculo intermedio, *fig.* 4, partiale deſideratur.

CALYX: PERIANTHIUM monophyllum, tubuloſum, quinquedentatum, dentibus ſubæqualibus, acuminatis, hirſutum, ſtriatum, *fig.* 5.

COROLLA monopetala, tubuloſa, ringens, tubus tenuis, ſuperne compreſſus, labium ſuperius erectum obtuſum, ſemibifidum, inferius patens, majus, trifidum, laciniâ intermediâ majori, emarginatâ, ad baſin hirſutâ et maculis ſaturatius purpureis notata, *fig.* 7, 8.

STAMINA: FILAMENTA quatuor ſub labio ſuperiore, quorum duo breviora: ANTHERÆ conniventes in formam crucis, albæ, *fig.* 9.

PISTILLUM: GERMEN quadrifidum, *fig.* 11, glandulâ cinctum, *fig.* 10. STYLUS filiformis, corollâ longior: STIGMA bifidum, acutum.

PERICARPIUM nullum, calyx in ſinu fovens

SEMINA quatuor, ovata.

ROOT perennial and fibrous.

STALKS, or rather Shoots, numerous, ſquare, creeping on the ground, and ſpreading wide, from whence ariſe the flowering ſtalks, which are from four to ſix inches high, ſquare, hirſute, (the hairs turning downward,) upright, weak, jointed, the joints hairy.

LEAVES oppoſite, ſtanding on long foot-ſtalks, ſomewhat kidney-ſhaped, notched, veiny, the leaf-ſtalks grooved on the upper ſide.

FLOWERS of a purple colour, diſpoſed in whirls around the ſtalk.

FLOWER-STALKS ſupporting three flowers.

INVOLUCRUM both univerſal and partial, *fig.* 2, 3, each compoſed of two fine pointed leaves, which however are wanting in the middle flower, *fig.* 4.

CALYX: a PERIANTHIUM of one leaf, tubular, with five teeth, (which are nearly equal, and long pointed,) hairy, and finely grooved, *fig.* 5.

COROLLA monopetalous, tubular, ringent, the tube ſlender, and compreſſed above; the upper lip upright, obtuſe, divided half way through; the lower lip larger, ſpreading, divided into three ſegments, of which the middle one is largeſt, with a ſlight notch, hairy at its baſe, and marked with purple ſpots of a deeper colour, *fig.* 7, 8.

STAMINA: four FILAMENTS placed under the upper lip, two ſhort and two long: ANTHERÆ white, forming a croſs, *fig.* 9.

PITSILLUM: GERMEN divided into four, *fig.* 11, ſurrounded by a gland, *fig.* 80: STYLE thread-ſhaped, larger than the corolla: STIGMA bifid, and pointed.

SEED-VESSEL none, the calyx in its cavity containing four

SEEDS of an oval ſhape.

GROUND-IVY has an aromatic, though not very agreeable ſmell; and a quick, bitteriſh, warm taſte. This herb is an uſeful corroborant, aperient, and detergent; and hence ſtands recommended againſt laxity, debility, and obſtructions of the viſcera. Some have had a great opinion of it for cleanſing and healing ulcers of the internal parts, even of the lungs; and for purifying of the blood. It is cuſtomary to infuſe the dried leaves in malt liquors; a practice not to be commended, though it readily communicates its virtue, and likewiſe helps to fine them down: ſcarce any other herb has this effect more remarkably than *Ground-ivy. Lewis's Diſp. p.* 150.

From the latter uſe, the plant has obtained the names of *Alehoof* and *Tunhoof. Raii hiſt. p.* 567.

The juice of the plant drawn up the noſtrils, not only mitigates, but totally removes violent and inveterate headachs. *Ibid.*

Notwithſtanding the credit which this plant has obtained with former writers on the Materia Medica, the modern practice holds it in little eſtimation.

Red hairy tumours are frequently found on it, which are occaſioned by the *Cynips Glechomæ, Linnæi Faun. Suecic. n.* 1520.

It ſlowly expels thoſe plants which grow next it, and hence impoveriſhes paſtures. *Lin. Fl. Suecic p.* 202.

Cattle are not fond of it, and horſes are ſaid to be hurt by feeding on it: to make amends for this however, the juice of the herb, mixed with a little wine, and applied morning and evening, is ſaid to take away the film on horſes eyes. *Linn. Fl. Suecic. ex Loes.* 123.

The plant is well known to grow under hedges, in woods, on banks, and ſometimes in dry paſtures. It varies in ſize according to its ſituation; the flowers alſo vary in the degrees of purple; and make their appearance in April, May, and June.

Glechoma hederacea





Hyacinthus non scriptus

Sansom Sculp

HYACINTHUS NON SCRIPTUS. ENGLISH HYACINTH.

HYACINTHUS *Linnæi Gen. Pl.* HEXANDRIA MONOGYNIA.

Cor. campanulata: pori 3 melliferi *germinis.*

Raii Syn. Gen. 26. HERBÆ RADICE BULBOSA PRÆDITÆ.

HYACINTHUS *non ſcriptus* corollis campanulatis, ſexpartitis, apice revolutis. *Lin. Syſt. Veget. p.* 276.

HYACINTHUS oblongo flore cœruleus major. *Bauhin Pin.* 43.

HYACINTHUS anglicus. *Gerard. emac.* 111.

HYACINTHUS anglicus belgicus vel hiſpanicus. *Parkinſon. Parad.* 122. *Raii Syn. p.* 373, Engliſh Hyacinth, or Hare-bells.

HYACINTHUS *non ſcriptus*, Hyacinth. *Dioſcoridis. Dod. Ludg.*

Hudſon. Fl. Angl. 123. *ed.* 2. *p.* 141. *Lightfoot. Fl. Scot. p.* 183.

RADIX: bulbus ſubrotundus, magnitudine nucis myriſticæ, candidus, ſucco viſcido repletus, ex ima parte plurimas fibrillas albidas dimittens.

ROOT a roundiſh bulb, the ſize of a nutmeg, of a white colour, and full of a viſcid juice, ſending down from the bottom numerous whitiſh fibres.

SCAPUS nudus, ſemipedalis aut pedalis, erectus, teres, lævis, ſolidus.

STALK naked, from half a foot to a foot in height, upright, round, ſmooth, and ſolid.

FOLIA quatuor, ſex, interdum plura, ſcapo duplo breviora, ſemunciam lata, carinata, concava, lævia, nitida.

LEAVES four, ſix, ſometimes more, twice as ſhort as the ſtalk, about half an inch broad, keeled, hollow, ſmooth, and ſhining.

FLORES octo ad duodecem; ſæpe plures, odorati, cœrulei aut violacei, rarius carnei aut albi, ſpicati, ſecundi, nutantes.

FLOWERS from eight to twelve, often more, ſweet ſmelling, of a blue or violet colour, ſeldom fleſh coloured or white, growing in a ſpike, all one way, and hanging down.

BRACTEÆ binæ, ſuberectæ, lanceolatæ, *fig.* 1.

FLORAL-LEAVES two to each flower, lanceolate, and nearly upright, *fig.* 1.

COROLLA ſubcylindracea, ſexpartita, laciniis revolutis, *fig.* 2, 3.

COROLLA almoſt cylindrical, divided into ſix ſegments, the tips of which turn back, *fig.* 2, 3.

STAMINA: FILAMENTA ſex, tria longiora tubum corollæ æquantia, inferne corollæ adnata, ſuperne libera, ſetacea, albida: ANTHERÆ erectæ, incumbentes, ſubſagittatæ, flaveſcentes, *fig.* 4.

STAMINA: ſix FILAMENTS, the three longeſt of which equal the tube of the corolla, below attached to the corolla, above free from it, tapering, and whitiſh: ANTHERÆ upright, incumbent, ſomewhat arrow-ſhaped, of a yellowiſh colour, *fig.* 4.

PISTILLUM: GERMEN conicum, angulato-ſulcatum, albidum: STYLUS corollâ brevior, apice violaceus: STIGMA obtuſum, villoſum, *fig.* 5.

PISTILLUM: GERMEN conical, angular and grooved, of a whitiſh colour: STYLE ſhorter than the corolla, at top of a blueiſh colour: STIGMA blunt and villous, *fig.* 5.

PERICARPIUM: CAPSULA triquetra, trilocularis, trivalvis, valvis ovatis, mucronatis, *fig.* 6.

SEED-VESSEL: a three-cornered CAPSULE, of three cavities and three valves, the valves oval, and terminating in a ſhort point, *fig.* 6.

SEMINA plurima, violacea, nitida, ſubrotunda, *fig.* 7.

SEEDS numerous, of a fine blue colour, and roundiſh ſhape, with a poliſhed ſurface, *fig.* 7.

THE *Hyacinth* is conſidered by the Dutch Floriſts, as the firſt of flowers, and as ſuch ranks in their catalogues; in one of which, viz. that of Meſſrs. VOORHELM and SCHNEEVOGT, of *Haerlem*, for the year 1778, the *Gloria Solis* is marked at a 1000 guilders, eleven of which make one pound ſterling.

The ſpecies which is the object of ſo much care and cultivation, and from whence ſuch numerous and beautiful varieties are produced, is not our Engliſh Hyacinth, but the *Hyacinthus orientalis* of LINNÆUS: nevertheleſs, the preſent ſpecies is often to be met with in gardens, though in a ſtate not much improved, being generally ſingle, and retaining its character of drooping flowers, by which character it is obviouſly diſtinguiſhed from a plant very ſimilar to it, which is much more common in gardens, and flowers at the ſame time; a plant overlooked by LINNÆUS; but named by Mr. BANKS *Scilla campanulata.*

Our meadows, woods, and hedge-rows, are beautifully decorated with the bloſſoms of this plant in the ſpring months. Its ſeeds are not ripened till the end of the year; and thoſe, on being ſown, did not vegetate till the ſecond year.

The term of *non ſcriptus* was applied to this plant by ſome of the earlieſt botaniſts, as may be ſeen in *Bauhin's Pinax*, and *Ray's Hiſt. Plant.* and implies, that the flowers were not marked with any kind of character, which the Hyacinth of the antients is ſuppoſed to have been, *vid. Bauh. Pin. p.* 47. and *Raii. Hiſt. p.* 1155.

The great uncertainty in which the antients have left us, by their vague and imperfect deſcriptions, appears in a ſtrong light, by what can be collected from their writings concerning the HYACINTH FLOWER. Since the revival of letters, commentators and botaniſts, have taken great pains to aſcertain the plant which the antient poets and naturaliſts called by this name; but with what ſucceſs, may be eaſily gathered, when we find them ſeverally fixing upon flowers of ſuch very different appearances as the Martagon, Larkſpur, and Iris, for the true Hyacinth.

The *Hyacinthine hair* of the antients, has alſo engaged the attention of the inquiſitive, ſucceeding poets copying the expreſſion from HOMER, who deſcribes *Ulyſſes* thus, in POPE or BROOME's tranſlation:

" *Back from his brows a length of hair unfurls,*
" *His* hyacinthine locks *deſcend in wavy curls.*
" *As by ſome artiſt, to whom Vulcan gives*
" *His ſkill divine, a breathing ſtatue lives;*
" *By Pallas taught, he frames the wond'rous mould,*
" *And o'er the ſilver pours the fuſile gold;*
" *So Pallas his heroic frame improves*
" *With heav'nly bloom, and like a god he moves.*"

This paſſage is thus imitated by MILTON, in his deſcription of the perſon of *Adam.*

——" *His fair large front and eye ſublime declar'd*
" *Abſolute rule; and* hyacinthine locks
" *Round from his parted forelock manly hung*
" *Cluſtring, but not beneath his ſhoulders broad.*"

It is ſurpriſing that all the commentators ſhould agree, in ſuppoſing HOMER means *black hair* by his alluſion to the *Hyacinth*, when he elſewhere in the Odyſſey, deſcribes *Ulyſſes* with *yellow* or *golden hair*: "Ανθας δ' εκ κεφαλης ολεσω τριχας," which correſponds with the ſimile in the above mentioned quotation, where the poet compares the hair flowing on his hero's ſhoulders, to *gold* inlaid on *ſilver*. But perhaps HOMER did not intend to expreſs any colour by alluding to the *Hyacinth*: this line in the original, " Ουλας ηκε κομας υακινθινο ανθει ομοιας," may be literally tranſlated thus:

" *She let down his hair curled like a Hyacinth flower.*"

The *Hyacinthus comoſus*, and its variety the *Hyacinthus monſtroſus*, or *feathered Hyacinth*, bear a ſtrong reſemblance to *curled hair*, and are natives of the warmer parts of Europe.

A deſire to point out the connection between botany and polite literature, has occaſionally induced us to venture on hints and remarks of this kind, which the learned reader will, we hope, look on with an indulgent eye, and remember that our attempts, ſuch as they are, add little to the bulk, and nothing to the expence, of the work.

JUNCUS CAMPESTRIS. HAIRY FIELD RUSH.

JUNCUS *Linnæi Gen. Pl.* HEXANDRIA MONOGYNIA.

Cal. 6-phyllus. *Cor.* o. *Capſula* 1-locularis.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

JUNCUS *campeſtris* foliis planis ſubpiloſis, ſpicis ſeſſilibus pedunculatiſque. *Lin. Syſt. Vegetab. p.* 280. *Sp. Pl. p.* 468.

JUNCUS planifolius; ſpicis petiolatis, nutantibus; petalis ariſtatis. *Haller. hiſt.*

JUNCUS *campeſtris. Scopoli Fl. Carniol. p.* 258.

GRAMEN hirſutum capitulis Pſyllii. *Bauhin. Pin.* 7.

GRAMEN exile hirſutum. *Gerard. emac.* 17.

GRAMEN nemoroſum hirſutum minus anguſtifolium. *Parkinſon.* 1185.

Raii Syn. p. 416, Small Hairy Wood-Graſs.

Hudſon. Fl. Angl. 132, *ed.* 2. *p.* 152.

Lightfoot Fl. Scot. 186.

RADIX perennis, craſſitie pennæ coracis, ſublignoſa, fibris plurimis nigricantibus inſtructa, repens.

CULMUS ſimplex, palmaris, aut dodrantalis, erectus, folioſus, baſi tumidus, teres, lævis, enodis.

FOLIA plana, piloſa, pilis e margine foliorum erumpentibus, acuta, apicibus ſæpe rufis, membrana deſtituta, foliola duo erecta inæqualia ſpiculis ſubjecta culmum terminant.

SPICULÆ plerumque tres, ſubovatæ, *fig.* 1. floreſcente plantâ erecta, pedicellis inæqualibus inſidentes, inferiore ſubſeſſili.

PEDUNCULI filiformes, e vaginâ ciliatâ prodeuntes.

FLORES decem aut duodecem circiter in ſingula ſpicula, ſeſſiles.

CALYX: ſquamulæ plerumque quatuor, ovato-acutæ, membranaceæ, inæquales, foliolis calycinis multo breviores, ſingulum floſculum ambiunt, *fig.* 2.

CALYX proprius, hexaphyllus: foliolis lanceolato-acuminatis, patentibus, perſiſtentibus, nitidis, carinatis, e fuſco-purpureis, *fig.* 3.

COROLLA nulla.

STAMINA: FILAMENTA ſex, ſubulata, breviſſima: ANTHERÆ oblongæ, calycem æquantes, flavæ, quadriſulcatæ, bicuſpidatæ, *fig.* 4, 5, demiſſo polline tortuoſæ.

PISTILLUM: GERMEN viride, triquetrum, acuminatum: STYLUS brevis, filiformis: STIGMATA tria, longa, filiformia, flexuoſa, villoſa, *fig.* 6.

PERICARPIUM: CAPSULA tecta, triquetra, unilocularis, trivalvis, *fig.* 7, 8, 9.

SEMINA plerumque tria, ſubrotunda, olivacea, *fig.* 10, 11.

ROOT perennial, the ſize of a crow quill, ſomewhat woody, furniſhed with numerous blackiſh fibres, creeping.

STALK ſimple, from three to nine inches high, upright, leafy, ſomewhat enlarged at bottom, round, ſmooth, and without joints.

LEAVES flat, hairy, the hairs proceeding from the edges of the leaves, pointed, the tips often of a reddiſh brown colour, not furniſhed with any membrane: two ſmall, upright, unequal leaves, placed under the ſpiculæ, terminate the ſtalk.

SPICULÆ, generally three, ſomewhat oval, *fig.* 1, upright when the plant is in flower, ſitting on uneven foot-ſtalks, the lowermoſt ſpicula nearly ſeſſile.

FLOWER-STALKS thread-ſhaped, proceeding from a ſmall ſheath edged with hairs.

FLOWERS about ten or twelve in each ſpicula, ſeſſile.

CALYX: moſt commonly four ſmall ſcales, of an oval pointed ſhape, membranous and uneven, and much ſhorter than the leaves of the true Calyx, ſurround the baſe of each floret, *fig.* 2.

CALYX: the proper Calyx is compoſed of ſix leaves, ſpear-ſhaped, with a long point, ſpreading, permanent, ſhining, keeled, of a browniſh purple colour, *fig.* 3.

COROLLA wanting.

STAMINA: ſix FILAMENTS, tapering, and very ſhort: ANTHERÆ oblong, the length of the Calyx, yellow, with four grooves, terminating in two points, *fig.* 4, 5; on ſhedding the Pollen becoming twiſted.

PISTILLUM: GERMEN green, three-cornered, pointed: STYLE ſhort, thread-ſhaped: STIGMATA three, long, thread-ſhaped, crooked, and villous, *fig.* 6.

SEED-VESSEL: a CAPSULE covered by the Calyx, three-cornered, of one cavity and three valves, *fig.* 7, 8, 9.

SEEDS uſually three, of a roundiſh ſhape, and olive colour, *fig.* 10, 11.

THE above deſcription is taken from the *Juncus campeſtris* when growing in its moſt uſual ſtate in dry paſtures; in ſuch ſituations it has ſeldom more than three or four ſpiculæ; in moiſter and richer ſoils, particularly on boggy ground, it will often have a much greater number: but though it varies in ſize and the number of its parts, it ſtill continues very diſtinct from the *piloſus*, or *Hairy Wood Ruſh.*

It flowers in April and May, and ripens its ſeeds in June.

The hairs of this, and ſome of the other Junci, are of a very ſingular kind; a ſtranger to plants, would ſuppoſe that ſome animal had been robbed of its hair by rubbing on it.

The appearance of this plant indicates a dry, and conſequently not very luxuriant paſturage.



Juncus campestris



Geranium molle

Sowerby Sculp

GERANIUM MOLLE. COMMON DOVES-FOOT CRANES-BILL.

GERANIUM *Linnæi Gen. Pl.* MONADELPHIA DECANDRIA.

Monogyna. Stigmat. 5. *Fructus* roſtratus, 5-coccus.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

GERANIUM *molle* pedunculis bifloris, foliiſque floralibus alternis, petalis bifidis, calycibus muticis, caule erectiuſculo. *Linnæi Syſt. Vegetab. p.* 515. *Sp. Pl. p.* 955. *Fl. Suecic. p.* 577.

GERANIUM foliis molliſſimis, hirſutis, reniformibus, ſemiquinquefidis, lobis ſemitripartitis, obtuſis. *Haller hiſt. n.* 939.

GERANIUM *molle. Scopoli Fl. Carniol.* an noſtra planta?

GERANIUM columbinum villoſum, petalis bifidis purpureis. *Vaill. Paris.* 79. *t.* 15. *fig.* 3.

GERANIUM columbinum. *Ger. emac.* 938.

GERANIUM columbinum vulgare. *Parkinſon* 706. *Raii Syn. p.* 359, Doves-foot, or Doves-foot-Cranes-bill.

GERANIUM folio malvæ rotundo. *Bauhin. Pin.* 318.
Hudſon Fl. Angl. p. 265.
Lightfoot Fl. Scot. p. 370.

RADIX annua, fuſiformis, ſimplex.

CAULES plures, utplurimum procumbentes, teretes, rubicundi, dodrantales aut pedales, villoſi, ramoſi.

FOLIA radicalia petiolis longis, teretibus, villoſis, inſidentia, ſubrotunda, villoſa, ſubtus venoſa, ſeptemfida, laciniis inciſis, caulina alterna in lacinias pauciores, anguſtiores et acutiores diviſa.

STIPULÆ ad ſingula genicula quaternæ, membranaceæ, mareſcentes.

PEDUNCULI longitudine et forma petiolorum üſque oppoſiti, bifidi, biflori: pedicelli pedunculo triplo fere breviores, ſtipulis minoribus ad baſin cinctis, ad lentem ſubviſcoſis.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovato-acutis, trinervibus, piloſis, inæqualibus, brevi mucrone, rufo, non admodum acuto, terminatis, *fig.* 1.

COROLLA: PETALA quinque purpurea, obcordata, calyce paulo longiora, unguibus parvis, utrinque ciliatis.

STAMINA: FILAMENTA decem, alba, æqualia, baſi lata, vix coaleſcentia: ANTHERÆ cœruleæ, *fig.* 2.

PISTILLUM: GERMEN quinquangulare: STYLUS ſubulatus, viſcoſus: STIGMATA quinque, rubra, reflexa, *fig.* 3, 4.

SEMINA quinque, ovata, glabra, *fig.* 5, 7, 8. *Arillo rugoſo* tecta, *fig.* 6.

ROOT annual, tapering, and ſimple.

STALKS ſeveral, procumbent, round, of a reddiſh colour, from nine inches to a foot in length, villous, and branched.

LEAVES: thoſe next the root ſitting on long, round, villous foot-ſtalks, of a roundiſh form, hoary, and veiny underneath, deeply divided into ſeven ſegments, which are jagged: the leaves on the ſtalk alternate, divided into fewer ſegments, which are narrower and more pointed.

STIPULÆ four at each joint, membranous, and withering.

FLOWER-STALK: general flower-ſtalk the length and form of the leaf-ſtalks, and growing oppoſite to them, bifid, and ſupporting two flowers: partial flower-ſtalks nearly three times ſhorter than the general one, ſurrounded at their baſe by ſmaller ſtipulæ, ſome of the hairs on which appearing glandular if viewed with a glaſs.

CALYX: a PERIANTHIUM of five leaves, oval, pointed, having three ribs, hairy, unequal, and terminated by a reddiſh and ſomewhat blunt point, *fig.* 1.

COROLLA: five purple PETALS, inverſely heart-ſhaped, a little longer than the Calyx, the claws ſmall, and edged on each ſide with hairs.

STAMINA: ten white FILAMENTS, of an unequal length, broad at bottom, but not perceptibly united: ANTHERÆ blue, *fig.* 2.

PISTILLUM: GERMEN five-cornered: STYLE tapering, with glandular hairs: STIGMATA five, of a red colour, and turning back, *fig.* 3, 4.

SEEDS five, oval and ſmooth, *fig.* 5, 7, 8, covered with a *wrinkled Arillus*, *fig.* 6.

THE *Geranium molle* is the moſt common of all our *Geraniums*, and one of the earlieſt in bloſſom, beginning to blow in April, and continuing through the Summer. Its moſt natural ſituation is on a dry bank; yet it very often is found in paſtures, and under walls. If growing by itſelf, the ſtalks are uſually procumbent; among other plants it is often drawn upright.

It varies very much in ſize; the flowers alſo vary much both in ſize and colour. In the *Lawn* before *Chelſea Hoſpital*, I have noticed this plant almoſt as large as the *pyrenaicum* of LINNÆUS. Its flowers are ſometimes white, ſometimes pale red, with many gradations of purple.

It is moſt likely to be miſtaken for the *rotundifolium* and *pyrenaicum*, neither of which are common plants with us: in what reſpect it differs from theſe, we ſhall mention when they come to be deſcribed.

We may remark here, that the *Arilli*, or coverings of the ſeeds, *fig.* 6, are curiouſly wrinkled; but the ſeeds themſelves are perfectly ſmooth.

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